

TRINITY COLLEGE CAMBRIDGE



ANNUAL RECORD 2020



Trinity College Cambridge
Annual Record
2019–2020

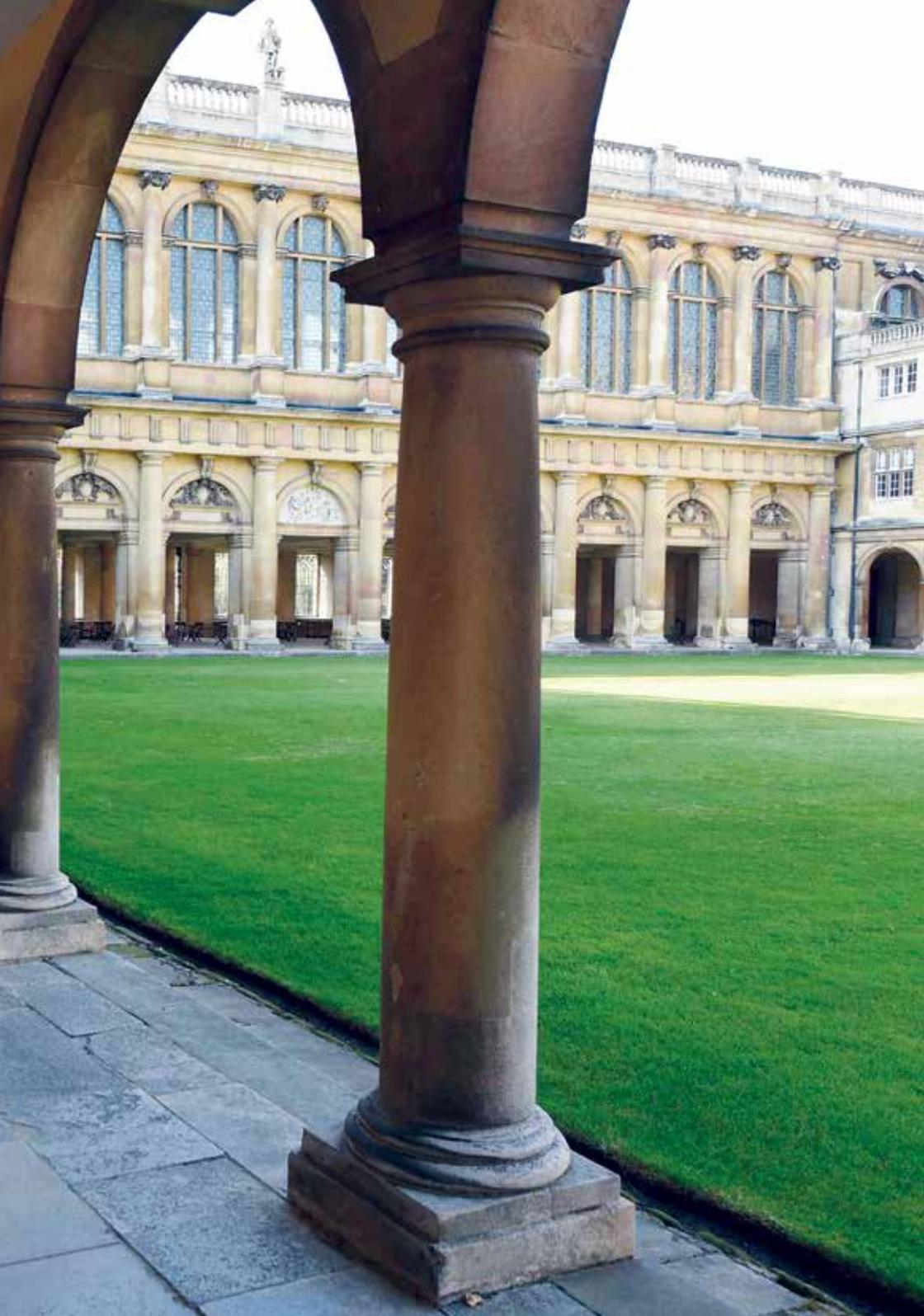
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Editorial



Stephen Bond

It is with some diffidence that I introduce myself as the new editor of this journal. As a musician more accustomed to expressing himself in performance or in often arcane forms of musical notation, I am conscious that I am following on from a succession of wordsmith historians – most recently David Washbrook – who have skilfully brought together reports of the College year within the context of a broader historical narrative.

David was Editor for four years, and his always highly readable editorials combined erudition with an expert eye for the more global ramifications of the year's events within College. Although lacking a historian's instinctive grasp of the larger picture, I have over the last thirty years at least amassed a sufficiently diverse portfolio of College roles that a relatively large proportion of readers will have had some contact with me at Trinity. I have been a Director of Studies in Music throughout my time here, was Tutor for Side A for nearly fourteen years and am currently standing in once again as a Tutor for Side G. Many of you will during your time here have received letters from me as Emoluments Secretary about grants from the College's eclectic array of student funds; and, of course, in my twelve years as Tutor for Admissions I had the happy task of signing the offer letters to around two and a half thousand of you!

When I was appointed as Editor back in January, the hot topic of debate was unquestionably the likely impact of Brexit on the College and wider University. External funding, collaborative research and even the global standing of Cambridge were – and still are – under huge threat. This threat has for me, like so many colleagues, a strong personal dimension: my research involves a large-scale editorial collaboration with scholars from the Czech Republic, Austria and Germany. A straightforward example of the changes that Brexit will bring to Trinity is the inevitable reversal of the fourfold increase in the College's

undergraduate admissions from the EU since I started as Admissions Tutor in 2002. As someone who did substantial outreach work for the University in Belgium, Cyprus, the Czech Republic, Luxembourg and Slovakia, I am certain that welcoming to Trinity talented students from all 27 other EU countries has over the years had an enormously beneficial impact on the College: seeking out the best young minds from around Europe has not only improved the quality of Trinity's collective academic endeavour but also unquestionably inspired UK students to raise their game. I thus share the Admissions Director's worry that the much higher level of fees for EU students from 2021 onwards 'will deter many potential applicants'. The genuinely international nature of Trinity makes the College unique in Oxbridge and is one of its great strengths.

In the event, however, Brexit has in 2020 been overshadowed by the Covid-19 pandemic, a calamity that was unexpected to at least the vast majority of us. Few of us thought that we would ever see the College send its students home for a whole term, lectures and even final examinations being delivered electronically, and the cancellation of the Freshers' Great Court Run (a traditional event humorously alluded to by Faisal Islam in his speech at Commemoration of Benefactors last March). Nor did it seem even remotely likely that, when Dame Sally Davies was installed as Master at the start of the 2019–20 academic year with all the usual pomp and circumstance, she would soon be employing her skills honed in the world outside in leading the College's Covid Committee. There is nobody in Trinity whose daily life has not been profoundly affected by the pandemic. Indeed, as I type this editorial, I am confined to my home because my twin daughters are self-isolating for a fortnight having been in contact with someone who has tested positive for Covid. But Trinity is a College that has brushed off the impact of the Great Plague, two World Wars and, more recently, St John's College spoiling the aspect of the Fellows' Bowling Green by building an inelegant extension to its catering department. The resilience, ingenuity and optimism in all aspects of College life exhibited by the Fellows, students and staff who make up Trinity – from online teaching to running student societies virtually and providing meals for those obliged to quarantine – are thus unsurprisingly evident in so many of the pages that follow.

One unanticipated challenge faced by Trinity in the coming year is the marked increase in the size of the first-year intake at a time when practical arrangements on the ground have been made more arduous and difficult. The larger first-year cohort of 225 – 12.5% bigger than average – is the result, not of any predictive

miscalculation by the College, but of the Government's less than sure-footed approach to concocting A Level results once it had decided to cancel the actual exams. Many of this year's Freshers have effectively not received any formal education for six months or more, so bringing such a large number of them up to speed for (all being well) sitting Tripos exams next June will require considerable resourcefulness and expertise on the part of Directors of Studies and supervisors. This year's admissions round will also be especially taxing. The current admissions team have the unenviable task of organising and overseeing more than a thousand online interviews.

Each year it is the sad duty of the Editor to remember distinguished colleagues whom we have lost in the previous twelve months. In this respect too, 2019–20 has not been kind to Trinity: this year we have bid farewell to five Fellows and one illustrious former Fellow. Full obituaries for all six of them appear in the pages below. Horace Barlow, a great-grandson of Charles Darwin, carried out important research on how our eyes filter information about our surroundings to help us navigate the world. He also played a major role in College life right up to his final year, always enjoying an informal, lively debate about current topics of interest at High Table. Michael Berridge's research led to a paradigm shift in scientific understanding of cell regulation and shed light on the biology of disease from cancer to cardiovascular and neurological diseases. The patient wisdom of his valuable contributions to College Council and many College committees will be missed by us all. John Davidson's career progressed from a childhood fascination with bubbles to pioneering major developments in the petrochemical industry. A Fellow of Trinity for more than 60 years, he served as both Steward and Vice-Master. An immensely practical man who listed 'mending domestic artefacts' amongst his hobbies in his *Who's Who* entry, John had a key role in Trinity's Buildings Committee during several phases of substantial change to the fabric of the College.

There are so many anecdotes about Roger Dawe's unorthodox approach to teaching Classics that it is often difficult to disentangle fact from fiction, which is ironic given that his research involved forensic philological examination of manuscripts transmitting core Ancient Greek texts. His eclectic knowledge and interests made him a most entertaining interlocutor, and he was most generous in devoting his time and expertise to the whole College community, after retirement even teaching English to members of the staff from abroad. Equally eclectic was Freeman Dyson, often said to be the best physicist never to receive

a Nobel Prize. His work embraced a wide spectrum of research areas, from solid-state physics and nuclear engineering to the search for extra-terrestrial intelligence, and climate change. Although Dyson was actually at Trinity for only a relatively short period of time in the 1940s, he lent the College much distinction through his subsequent career in the United States.

Ian McDonald was a Fellow of Trinity for just over forty years, teaching Physical Chemistry and researching mainly in the field of Molecular Dynamics. He also made an important administrative contribution to the College, serving for eight years (1994–2002) as my immediate predecessor in the post of Admissions Tutor. Ian brought all his scientific rigour to his oversight of Admissions, systematically examining the efficacy of the various criteria used to select students, with the inevitable result that by 1997 Trinity had rocketed to the top of the Tripos Table. Ian was a huge help to me in the year when I was preparing to take over as Admissions Tutor, and his quiet but steely determination at all times to promote fairness in the College's admissions procedures inspired me to strive to maintain the high standards he had set. I am grateful to have this opportunity to pay a personal tribute to Ian.

One further regrettable consequence of the Covid-19 pandemic has been the absence for the first year since its inception in 1981 of the renowned table compiled each summer by Trinity alumnus Peter Tompkins (1978) ranking Cambridge colleges by Tripos results. Despite their best efforts over the last four years, this is something that the Old Schools had previously failed to achieve. But with the methods of assessing students in 2020 varying across the Departments and Faculties, and with some of those in their first and second years receiving only informal indicative grades, no meaningful rankings could be constructed, and so Trinity will have to wait at least another year for its chance to knock Christ's off the number one spot. The reports of some of the Sports societies below – notably Tennis – tell similar tales of probable hegemony thwarted; and, sadly, Trinity was robbed at the eleventh hour of seeing a strong 2020 men's Blues boat being coxed by one of our students.

To strike a more positive note, it has been another excellent year for awards and honours recognising a wide variety of our Fellows' achievements. With space at a premium, I hope that I will be forgiven for singling out a few of the highlights from the impressive list below. As David Washbrook reported in his 2019 *Annual Record* Stop Press, Didier Queloz was awarded the 2019 Nobel Prize for Physics for pioneering advances in physical cosmology and discovering

an exoplanet orbiting a solar-type star; in 2020 Didier also became a Fellow of the Royal Society alongside Marian Holness and Hugh Osborn. The Queen's New Year Honours and delayed Birthday Honours lists have yielded a bumper crop of awards for our Fellows: Tony Cheetham became a Knight Bachelor, and the College was enriched by a Trinity of Damehoods: the Master, already a Dame Commander of the Order of the British Empire (DBE), further became a Dame Grand Cross of the Order of the Bath, and both Lynn Gladden and Sarah Worthington became DBEs. Also notable was the MBE awarded to our Director of Music, Stephen Layton. No grouping within College has suffered more under the restrictions imposed in the wake of the pandemic than has our Chapel choir, and Stephen's dedication and inventiveness in keeping up his trademark exemplary standard of music-making have been most uplifting in these dark times. The 'Covid aware' Duruflé Requiem recorded in Trinity Chapel on 30 September 2020 ranks amongst Trinity Choir's finest achievements.¹

One national celebration somewhat overshadowed by lockdown this year was the seventy-fifth anniversary of VE Day on 8 May, even if the clement weather enabled many of us to participate in modest socially distanced street parties to alleviate the tedium of what felt like house arrest. The Features section of this year's journal contains a remarkable 'VE Diary' covering the three momentous days 7 to 9 May 1945. This diary, written by alumnus Robin Cuany (1944) and recently discovered by his daughter Gwendolyn, blends the exhilarating sweep of historical events with the minutiae of domestic College life in a drily humorous manner that is both highly entertaining and informative. Two further featured essays offer erudite and fascinating broader perspectives on the global pandemic. Peter Sarris explores the parallels between the impact on human societies and globalised trade networks of Covid-19 and the 'Justinianic Plague' in the mid-sixth century. Philip Allott elucidates with amazing eloquence and succinctness the ways in which the 'exceptional' nature of the Covid crisis has exposed the fragility and the complexity of the social aspect of human existence.

Finally, for a College whose name is a byword for the study of Mathematics, 2020 has been a most auspicious anniversary year: that of the death of the largely self-taught mathematician Srinivasa Ramanujan (1887–1920), described by Béla Bollobás in his masterly feature article as 'an extraordinary mathematical

1 <https://www.youtube.com/watch?v=c-RiYOpayVw>

genius, perhaps the most remarkable Fellow of Trinity ever'. Béla compellingly conveys not only the brilliance and continuing importance of Ramanujan's mathematical work, but also Ramanujan's humility, generosity and altruism. Béla's article also dissects the shortcomings of the 2015 Ramanujan biopic *The Man Who Knew Infinity*, constructing a picture of Trinity and its Fellowship in the early twentieth century that is more nuanced and sympathetic than the caricature created in the film.

There is no better way to conclude than with such a remarkable story affirming Trinity's core values of excellence and openness. I will close by wishing you all a peaceful and interactive Christmas, in the hope that the regulations will be relaxed in order to allow families to be together at the close of a year that has been characterised by separation and division, and by expressing my heartfelt good wishes for the New Year – may 2021 be a year that brings greater stability and happiness for you all.

Paul Wingfield (1990)



Joanna Cooney



COMMEMORATION

CHAPEL ADDRESS

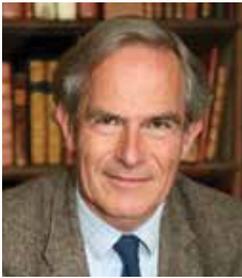
THE HEALTH OF THE COLLEGE

THE MASTER'S RESPONSE ON BEHALF
OF THE COLLEGE





Commemoration



Chapel Address at Commemoration of Benefactors 13 March 2020 David McKitterick FBA (1986)

‘Some there be who have no memorial.’ Each year, as we gather to commemorate the generosity and well-wishes of our benefactors, some names mean more than others in the list that is printed in the service sheet. High up on the list of those who gave for Buildings is one who

gave for ‘the repair of Garrett’s Hostel, which was thenceforward called Bishop’s Hostel’, to quote from the service sheet. This was John Hacket, Bishop of Coventry and Lichfield. Those two lines conceal a story that has several ramifications, and that affect us all today in ways apparently somewhat remote from that attractive late-seventeenth-century building that now houses students. I have chosen to talk about him today because this year is the 350th anniversary of his death and bequest in 1670.

John Hacket came up to Trinity in 1609, took his BA degree in 1612/13, and in 1614 was elected a Fellow. Thanks mainly to his principal patron John Williams, Bishop of Lincoln, he accumulated an armful of ecclesiastical appointments until his career came almost to a halt with the execution of Charles I in 1649. Like others, the middle years of the century were years of survival. Soon after the return of Charles II, in 1661 he was appointed Bishop of Coventry and Lichfield, and thus was faced with a cathedral at Lichfield that had been all but destroyed in the Civil War. Earlier in his life, when he was Rector of St Andrew’s, Holborn, he had raised money to repair that church. Although he succeeded in raising money, the project failed when it was confiscated by the Long Parliament in order to pay for the war against the King.

Lichfield cathedral was another kind of challenge. Partly with his own money, and largely with money raised from well-wishers, he set about its rebuilding. According to his first biographer he showed ‘incessant importunity’, and ‘unspeakable diligence in soliciting for money’. The work was completed in eight years. Not everyone was in favour. Well able to take difficult decisions, he dismissed the Dean of Lichfield when he was opposed. The feasting on the completion of the work was spread over three days as Hacket ensured that each group of benefactors and well-wishers was properly acknowledged. He died in 1670, and his near life-size marble effigy is now in the cathedral.

In his Will, Hacket left virtually all his books to the University Library. In the year before he died, he had been in correspondence with the College, with a proposal that he would give £1,200 to the College so that a new building for students could be erected, from which the rents would go straight to Trinity’s Library. Perhaps the idea of a new building appealed to him in much the same way that he had faced repairs and building in London and at Lichfield. In any case, this was an ingenious idea: much more ingenious, and indeed beneficial, than simply giving that money to the College for it to use as it willed, or, indeed, even than giving it for the benefit of the Library. Future rents would ensure a steady income, and if rents rose, so would the library fund.

In fact, there were three outcomes: one as anticipated, one an unexpected stroke of fortune, and one that caused ructions. In place of an older and decrepit building, what we now know as Bishop’s Hostel building was completed in 1671 at a cost somewhat over Hacket’s bequest, and the rents began to flow in. Some of the early rents went to pay for the overspend in construction costs. Then, less defensibly, and illegally, it went to help pay for building the new Wren Library. But eventually all was sorted out, and the income was spent on books: those bought with the Hacket money have a large bookplate, with his portrait. For the Library, it was both welcome and a challenge. It potentially doubled the amount available each year to spend on books.

As a warning to those who might in the future be tempted to spend the rents other than on books for the Library, when Hacket’s full-length painting was hung in the Wren in the eighteenth century it showed him holding a prominent extract from his Will, that ‘the rents of the several chambers of Bishop’s Hostel so rebuilt be yearly employed to furnish the Library of Trinity College with books’. We may perhaps see in this highly visible reminder the firm if not always politic hand of the Master, Richard Bentley, who had noted how the Fellows

pocketed the money themselves. ‘When upon my coming in 1700 I put a stop to this Corruption, the Peace of the College was much disturb’d, and the Seniors were very clamorous to have this Robbing allow’d again at every Audit for five or six years together.’¹

When Hacket died in 1670, the old College library was still on the first floor in the north-west corner of Great Court, in a room built at the end of the sixteenth century. It was almost full, and there was certainly insufficient space to cope with the influx of books that the Hacket fund now promised. Nor was the building strong enough to take the extra weight. Matters were compounded when another benefaction arrived, this time of almost 2,000 books from the library of James Duport, former Fellow and latterly Master of Magdalene.

Hence the unexpected outcome. The poor physical state of the building, and the increased additions, both pointed to an urgent need: for a new library. For once, the College acted with comparative speed. In 1677 it issued a printed appeal – the first document of its kind of which we know in the history of Trinity – signed by the Master, Isaac Barrow. It began:

Whereas the Right Reverend Father in God, Dr. John Hacket, late Lord Bishop of Lichfield and Coventry, out of his great kindness to Trinity College in Cambridge (of which Society he some time was a most worthy Member and Ornament) did enlarge the same with a fair Building, the Yearly Rents whereof, he did out of his great Wisdom, Assign to be employed in Buying Books for the Library of the said College: And whereas the present Library, notwithstanding much cost laid out in Supporting and Repairing it, is found too weak a Fabrick for the great weight of Frames and Books, already contained in it; so, that its failing for a time hath been feared, that fear growing with frequent accessions of New Books thereto We, the Master and Fellows of the said College have entertained a design of Erecting a new Library

Thus in a few sentences was linked a chain of events: John Hacket’s bequest, the new Bishop’s Hostel, the fund for purchasing books, the poor condition of the existing library building, and all leading directly to what became the Wren Library, which was finally completed in 1695. Hacket’s own career, in raising funds to

1 Richard Bentley, *The present state of Trinity College in Cambridg* [sic] (1701), p.14.

rebuild a City of London church, in rebuilding Lichfield cathedral, and in leaving money to erect a new block in Trinity, all suggest that he had more than a passing interest in buildings. But even he cannot have foreseen what was to become the Wren Library, completed a little under thirty years after his death.

There are various lessons in all this. First, it was a kind of arm's length gift. By giving money for a building that would produce annual rents, he ensured that its capital would not be spent down, and that, all being well, income would rise as rents rose. Second, it spoke to a direct and immediate need, the improvement of the stock of books in the library. The money was eventually used for a series of standard reference books essential to a library of this stature, but which hitherto the College had been unable to afford. These are familiar enough themes in any fundraising campaign, though not all benefactors have necessarily had this kind of informed imagination. Third and last, it brought wholly unexpected fruits. Never in his wildest dreams can Hackett have thought that by paying for a modest building designed for students, whose rents would pay for books, would the College within seven years be thinking of a library larger than any in Cambridge, and that was to become one of the finest in the world.

On occasions such as today we rightly commemorate benefactors for their gifts, but we also commemorate the sometimes surprising consequences.



RWendland

Faisal Islam (1995) proposed the health of the College at the Commemoration Feast, 13 March 2020

Master, Fellows, scholars and guests; my name is Faisal Islam, and I return here 25 years on from my matriculation in 1995 . . . a feast not quite the match of this, but pretty close. One which was to live in infamy and lead to the ban of the night-time Great Court Run, or replacement at least with a more sober spectacle.

I arrived, luckily for me, straight off the train from Manchester Piccadilly, strictly speaking having changed at Ely, of course. And it was a fortuitous time to be arriving at this auspicious institution, in possession of a soft

Northern English accent, to come from a city at the height of the Manchester music scene, and one with an all-conquering football team that played in red. Cambridge was, much to my utter amazement, for others deemed a metropolis, a Blade Runner-esque cityscape of endless possibilities and bright lights. For your speaker it was a small town, a rustic, rural retreat of cobbles, greenery, and strange gowns.

I was lucky enough to experience the true magic of this College empirically. My own personalised version of the history of Trinity was slowly to reveal itself to me, over the years of my presence here. I did not know, frankly, that of the three Nobel Prizes in Economics awarded while I was studying economics here, two would be Fellows at Trinity during my time. I did not know the rich history of connection with my parents' birthplace, India. Chancing upon it while visiting, with the aid of a College travel bursary, the home in Delhi of India's founder, Nehru. A grainy black and white picture of the future first PM of India had the instantly recognisable vista of a College quad in the background.

Above all, the arrival during my time here of the incumbent Economic Nobel Prize winner, as Master of College, Amartya Sen, was its own special honour and privilege. Few people know this story. Professor Sen's scholarship helped redefine thinking on economic development and freedom itself. But it also just happened to be that when he was installed as Master, he arrived at a college where I was President of the student body, the TCSU. My roots are in a specific part of Bengal in India. On my mother's side in the villages around a small university town founded by a previous Indian Nobel laureate and poet – Rabindranath Tagore. That university town, Santiniketan, was where Sen lived in India. And I will never forget on my graduation day in 1998, the Master was very insistent on inviting my parents to the Lodge for a small gathering. Not everyone gets the pleasure of an audience there. With Henry VIII's portrait peering down on you, and a seat once used by Newton, I was told but failed to factcheck, the one he was sat in when the apple dropped from the tree. So there we were, me, and my mum and dad (a recently retired Moss Side subpostmaster), the Master, and his own visiting mother, a formidable scholar of Sanskrit, and one other economist, Mimsy Kabir – all of us with roots in West Bengal. At that point, the penny dropped. We were the entertainment for the Master's mother! Or at least there in the capacity for melodious singing of Tagore's beautiful songs in Bengali (not by me I should say though) in this seat of the British establishment. I am not sure this was what the East India Company had in mind when it landed in the

subcontinent a century or so after this College was founded. The Empire strikes back, you might say.

It was then, and only then, that my father revealed to me that when he arrived in the UK from India in the 1960s to live in Manchester, his small accounting firm had sent him on a summer course in Cambridge. He had not told me anything of this until my graduation, but he had dreamt of sending one of his children to the same place Nehru was educated. My parents ended up sending two, including my brother Omar (a medic) too.

So, as I stand before you today, and as we commemorate the founding of this institution, I would also like to commemorate what it has done in history for us all. It has been a factory of world-beating wisdom and knowledge across so many disciplines. Our founder was the then ruler of England, with power to rule by decree over Parliament, who had just engineered an historic break from Continental Europe. We can be thankful that one of the final acts of Henry VIII's legacy was to sign the letters patent to create this institution. The ultimate legacy of this is that the country and the world have been well served by an endless flow of expertise, innovation and progress from physics, to medicine, mathematics to economics.

Today we are honoured that the recently installed new Master, Dame Sally Davies, presides here. Her achievements in public health and, in particular, in leading the global push on antimicrobial resistance – making the UK a world leader on this agenda. Dame Sally was awarded the Dame Grand Cross of the Order of the Bath in the Queen's New Year Honours List. Dame Sally was of course before coming here the Chief Medical Officer, and it is some of her carefully drafted, scientifically referenced work that protects us today at this time of acute public health crisis. Plans that we had hoped never to have to use, that would have been kept locked away, but plans that needed to be developed nonetheless for a rainy day. Well, those days and weeks and months are now upon us. And we will be thankful that our response to this current health crisis engulfing the world is built on the reason, the science and the expertise of people such as the Master of the College.

But this is more than about individuals. The concept of expertise itself is contestable and weaponised in the fake news world. I have had a frontline seat in this over the past five years. And my questioning Trinity brain has suffered some seizures; occasionally live on air. It was to me exactly three weeks before the EU referendum that a still influential Cabinet minister said: "The people who

are arguing that we should get out are concerned to ensure that the working people of this country at last get a fair deal. *I think the people in this country have had enough of experts* with organisations from acronyms saying...” It was an astounding thing for any Cabinet minister to say, let alone a former Education Secretary. Interruption is a weapon to be used sparingly in a live TV interview, but this required clarification. “This country has had enough of experts? What on earth do you mean by that?” I responded with incredulity. “From organisations with acronyms saying that they know what is best, and getting it consistently wrong,” Gove said again. But it was not enough of an explanation. I needed to show everyone who was watching whether this man, one of the Great Officers of State, was really dragging his campaign into some nakedly populist territory. “The people of this country have had enough of experts?!” I repeated his words again. “Because these people, these people are the same ones who got consistently wrong what was happening,” Gove replied. “This is proper Trump politics, isn’t it?” I suggested. “It’s Oxbridge Trump”.

It was an extraordinary moment. It went around the world. It foretold of political change, not just in the UK, but of change soon to transform the US, of change set to spread across Europe. It has redefined the word “expert”. It was no off-the-cuff remark. It was a practised response to silence reasonable and plausible questions about the implications of Brexit. It set the tone, but it was also the message. And the message was stark: the campaign to Remain in the EU was not just wrong, it was inherently corrupted by an elite of vested interests, who used the money they made from the EU to pay “experts” to lie about the economics of EU membership, masking the fact that the EU was responsible for Britain’s problems. This argument was just a means to an end, a way of shutting down opposition to his ideas. He was offering a seductive choice. Choose faith. Choose your own instincts. Distrust experts, eschew debate, ignore complexity. Facts, compromise, nuance, trade-offs. None of that matters if you just believe. It was cultivating a closed mindset in followers. Even the very act of trying to hold a political campaign to account is going to be perceived as biased and corrupt. This was the opening salvo in a systematic campaign to destroy the public’s faith in institutions such as the Bank of England, the civil service, the judiciary and what remained of faith in the media. Whatever the result of the referendum, this questionable approach would inevitably open up some dark fissures in British society. And though it appeared right for a few years, it must be the case that it is now fundamentally untrue.

Experts are not infallible. They should be questioned; actually, that is the essence of how their judgements, their science, is constantly improved. Indeed, this is the basis of the scientific method. And the first thing I learnt here about economics – I had not studied it before arriving here – was why the philosophical basis of my chosen degree made no sense whatsoever. My gap year backpacking in Indonesia was rudely interrupted by a letter from The Lord Eatwell demanding an essay on admission deploying PhD level books on a subject I hadn't yet studied, that sought systematically to dismantle the fundamental axioms of economics. Let's just say this approach breeds a sceptical mind. Errors are corrected by good honest questioning of everybody. But for that to work there needs to be some common basis, a set of facts or judging facts from which to make decisions; and also strong institutions. Strong institutions speaking truth to power are exactly what makes countries good, better, and yes, makes them great.

Now it is true to say that our founder Henry VIII was not always tolerant of all the advice he did not want to hear. Some of his advisers ended up on a rather sticky wicket. And I'd like to think that the Fellows of Trinity College would be delighted to know that during the heat of the Brexit crisis last year, two alumni, myself and Kwasi Kwarteng, were seen debating on a TV camera the merits and demerits of a no-deal Brexit – or rather I was following the Brexit Department minister down Whitehall, haranguing him on the prospect of tariffs. It is at times like this that I channel one of the great academic insights of our former Master, Amartya Sen, that democracies with a free press do not have famines. Only when institutions are leant on, suppressed, and gagged, are lives lost in such large numbers.

Some expertise is very, very useful, as we are finding out; and I would again in current circumstances like to pay tribute to the work of all the generations of Trinity medics, from Dame Sally to my brother Omar, who are currently preparing to defend the country at some risk to themselves, from this invisible menace. They are just doing what they were trained to do, and expect no thanks, but they deserve to be in our thoughts, hearts and prayers. But sometimes expertise is just fun. And the one surprising thing bequeathed to me by an education here was the opportunity to represent the College in the Christmas special University Challenge as Captain. We won against an Oxford college. I delegated most of the difficult questions. But I had Fields Medal winner Tim Gowers on my team, which seemed unfair. What I had not expected was that he would apply his probability matrix to patterns of questioning, revealing a large chance of a question from Jeremy Paxman about Christmas number one

movies. I never should have doubted when the buzzer went, “Trinity Gowers”, and the answer “Die Hard” emerged from this highly educated mouth.

It turns out the people of this country cannot get *enough* of experts, and long may this institution continue to show this as we enter the 475th year. We look forward to the party in 2046. For now, let me toast this institution at the world’s best university, as well as your own and your family’s good health.



Response on behalf of the College, by the Master, Dame Sally Davies, 13 March 2020

Faisal, many thanks for your speech, your toast to the College and your congratulations and welcome to me. Faisal Islam (1995, Economics) is the Economics Editor of BBC news. This address showed why you won multiple awards for economic journalism and political interviewing, and why I will be buying your book, *The Default Line* on the financial crisis. I wonder if there are any lessons for the current global economic challenges?

Our thanks also to Professor David McKitterick FBA, formerly the Wren Librarian and Emeritus & Honorary Professor of Historical Bibliography, our speaker this evening in Chapel. Thanks to our fantastic chefs (long gone home) and our serving staff still present, who will be here long after we have departed, clearing up.

At this feast we commemorate past Benefactors from Edward II to Henry VIII and until now for their immense contribution to College and through Trinity to Cambridge. But we also pay tribute to and thank living Benefactors. I am delighted to welcome one of our Fellow Benefactors back to College this year and look forward to bestowing this status on another alumnus in the coming months.

Each year we invite to this Feast alumni whom we recognise for distinction in their careers, those who have donated generously to the College, and those who have given generously of their time to the College, including those who have chaired an Alumni Association. I would therefore like to welcome our Trinity College alumni who are our guests this evening.

First, let me welcome Dr Lisa Jardine-Wright (1994, Natural Sciences), of whom we are proud for receiving the Lawrence Bragg Medal and Prize (2019) from the Institute of Physics. Lisa is the Director of Isaac Physics, Director of Studies (Physics) and Tutor, at Churchill College, Cambridge.

Can I now please introduce to you the Rt. Hon Sir Oliver Letwin (1975, History) and his wife Lady (Isabel) Letwin. Oliver was from 1997 until 2019 the Conservative MP for West Dorset, and in Government he was, amongst other things, the Minister for Government Policy and Chancellor of the Duchy of Lancaster from 2014 to 2016. During my time as Chief Medical Officer (CMO), Oliver was one of the politicians who ‘got it’ more than most, but that did not stop us having the odd disagreement or two.

Now let me introduce to you Mr Charles Roxburgh (1978, Classics), who is currently the Second Permanent Secretary to HM Treasury, where he represents HM Treasury on the Bank of England’s Financial Policy Committee. Before he joined the Treasury in 2013, Charles spent 26 years at McKinsey and Company, where his main focus was clients in the financial service sector. We thank Charles for his ongoing contributions to the Boat Club, Student Support and General Funds.

Can I now welcome Mr James Penney (1984, Theological and Religious Studies) and Mrs Alice Penney (1984, English). James and Alice met here at Trinity, and Alice is now Church Warden for the local Parish Church while James is the Chairman at Darwin Property Investment Management. James and Alice are significant undergraduate bursary funders, and in 2019 they pledged support towards PhD studentships in the Humanities. Thank you very much, James and Alice.

Now, I welcome Mr John Slosar (1978, Economics), who has been a very generous supporter of the College. With a long history of hosting Trinity events whenever we are in Hong Kong, the plan was for an event this year, which for obvious reasons we have had to postpone. I do hope we are able to take up your generous offer soon, John.

Could I please introduce Mr David Jones (1958, Physiological Sciences) and his wife Mrs Jean Jones. David is the former President of the Trinity Boat Club Association and continues to donate to the Boat Club; thank you. Without the time given by our alumni volunteers our Associations would be far less successful than they are, so thank you David, we are indebted to you.

Can I please introduce to you Mr John Yeomans (1975, Mathematics) and his wife Mrs Fiona Yeomans. John is an Angel Investor and on the Board of Cambridge Angels, where he was previously the Chair, and is welcomed here tonight as he too has dedicated time to the College since he graduated, including as the former Chair of the Trinity Engineers' Association. Thank you, John, for all you have done for the College.

Finally, I welcome John Tweddle who has been managing the College's property portfolio at Bidwells for longer than I am sure he would care to remember. No, he was not there when we bought Felixstowe in the 1930s, but he has certainly seen the Science Park develop since inception. He no longer manages the portfolio day to day, as he is now dedicating most of his time to the College's investment at Dunsfold, so as you move onto that new chapter, John, we thank you for your achievements to date.

I would also like to thank all donors who supported the Pilot Top-up Bursary Scheme (I am sorry but there are too many to name) last year, which has provided additional much needed funds to a greater number of our undergraduates than in recent years.

In addition, I would like to put on record our thanks to Dame Diana Brittan and friends for establishing the Leon Brittan fund for European Studies this last year. Launched in the week when Leon Brittan would have been 80, this fund will initially support outstanding candidates to study for a Master's degree in the field of European Studies. Lord Brittan was a regular feature of Master's commemorative speeches: he was a guest of the College in 1989 and is mentioned in Andrew Huxley's speech, and also in 2000, when he was mentioned in Amartya Sen's speech because Lord Brittan was the alumnus invited back to give the toast to the College that year – so it is with great pride that twenty years after that occasion we now celebrate the establishment of a Fund for European Studies in his name.

I also thank and put on record our appreciation to Eashwar Krishnan and Tzo Tze Ang, who last year made the biggest pledge received by the College, for continued support of the Krishnan-Ang overseas studentship scheme, which last year celebrated its tenth anniversary.

As a doctor, I am used to nature taking its course, but in a community such as ours this process leaves holes that will never be filled in. My first experience was, in Michaelmas Term, attending the Memorial service for our former Master, Sir

Michael Atiyah, Fields Medallist and former President of the Royal Society. For me this was special, coming new to College, meeting his family, colleagues from around the world and our own Fellowship, and learning what a great intellectual leader and Master he was. I also found, to my pleasure, that he was as anti-smoking as I am. So, I am sure he would support our recent decision to ban smoking and vaping in Trinity.

I am also sorry to report the death from Honey-fungus, last year too, of the apple tree in the Master's garden, descended from that of Newton at Woolsthorpe Manor. It was a present to Sir Michael from his Fellow Officers at the Royal Society. I am pleased that our wonderful gardeners have already planted another.

I am sad to report the deaths of some of our older Fellows over this last year:

Professor Thomas Jessel (1974), Physiology; Professor John Davidson FRS FEng (1957), Engineering; Dr Roger Dawe (1963), Classics; Professor Michael Berridge FRS (1972), Cell Biology; and Freeman Dyson aged 96, at the end of February (Fellow from 1946 to 1949 and Honorary Fellow from 1989).

With our respects paid, now for the joy of sharing celebrations. Everyone at Trinity joined me in congratulating Didier Queloz for his Nobel Prize in Physics 'for the discovery of an exoplanet orbiting a solar-type star' last October. We have all really enjoyed celebrating with you. We congratulate too our Fellows awarded Professorial Chairs this past year: Peter Sarris, Jason Miller, Caterina Ducati, Per Ola Kristensson. And Dr Andrew Sederman on his Readership. Also, Anna Maria Hartmann on winning the Roland H Bainton Prize, and Guy Gunaratne (FCCA), who last year won the Dylan Thomas Prize, the Jhalak Prize and the Authors' Club Best First Novel Prize.

Many congratulations go to our students and computer science Fellows – they swept the board at the UK & Ireland Programming Contest taking 9 out of the 12 top places! And to our student George Rosenfield for founding 'Alternative May Week'. As a result of this, he raised an astonishing £80,000 for the 'Against Malaria Foundation' and won the Vice-Chancellor's Social Impact Award. George has just reported that 300 students have joined this year, raising £90,000. Since its foundation in February 2018, over 500 students have joined MWA, raising a total of more than £140,000.

Now, to the examination achievements of our students. In 2019, 43% of our students obtained a first and 86% obtained no less than a 2.1. Fifteen students

came top of their individual University Tripos exams. Of the 99 students who graduated in 2019 with first-class results, 51 achieved firsts throughout their time at Trinity. The College continues to rank top overall in the Sciences but results in the Arts & Humanities too were particularly pleasing in 2019. In History, 50% of students achieved firsts in the Part I and Part II exams.

I wish to draw attention to the enormous dedication shown by all our Teaching Fellows and external Directors of Studies, who provide an enviable level of high quality teaching and guidance to our students, and the Tutors, who consistently go the extra mile to provide the highest level of pastoral support to our students, some of whom face considerable personal challenges. Students give glowing feedback in the termly questionnaires describing their supervisors as ‘entertaining, exciting, enthusiastic, passionate, clear, thorough, supportive and encouraging.’

Although I cannot mention all alumni achievements, a number of recent accomplishments deserve recognition this evening. The Rt. Hon. Mrs Justice Carr (1983, Law) was appointed to the Court of Appeal in 2019 and is due to be sworn in next month.

Also, the following alumni gained recognition in the New Year Awards: Professor Lynn Gladden was appointed Dame Commander of the Order of the British Empire for services to academic and industrial research in chemical engineering; Professor Tony Cheetham, recent Fellow and now Honorary Fellow, was Knighted for services to Material Chemistry to UK Science and to Global Outreach; and Mene Pangalos (not a Fellow) of AstraZeneca, who has High-Table dining rights, was Knighted in recognition of his services to UK sciences.

Now to our Choir and Music, who have launched live video webcasts of Sunday Evensongs on YouTube, which are now watched by thousands of people around the world, and released a new Finzi CD, described as ‘outstanding’ and ‘Trinity at their absolute best’ by *Gramophone* magazine. I should also mention that Dr Nicolas Bell and the Wren Library team welcomed 28,000 tourists last year, alongside special interest groups – a doubling of visitors over the last ten years.

Our thanks go to our outgoing TCSU President, Emily Song, and the Committee – a great team. We welcome incoming President Ludvig Brekke and his team. Likewise, thanks to the BA Committee team, led by Lukas Gast.

And finally, sport. The Annual Sports Match against Christ Church took place in Oxford on 2 March; we took 120 people and contested twelve different

sports. Trinity lost by a single match, but it was good to see Trinity sport looking so strong and healthy.

At my Installation, as Master I had the pleasure of introducing our new Title A Fellows, the JRFs, to the Fellowship. As we all know, they are not only a great set of scholars, amongst the best of their generation, but also they are our future – to be nurtured. So, it is a particular pleasure to reflect on a few of their successes (there are many more that I could cite, but do not because of time): Aled Walker works on Number Theory and has been exploring ‘Gowers norms’ and more recently mathematical questions without the word ‘inequality’ in the title; Alex Kendall has shown that self-driving cars can learn to drive from scratch starting randomly using feedback. He has even tested a self-driving car on the public roads of Cambridge and has founded a startup called Wayve; Micha Lazarus has published or has in press six papers from his last year’s work and has started to research books owned and annotated by Roger Ascham – including one of his Greek books containing annotations from one final tutorial he gave Queen Elizabeth when she summoned him to Court only six weeks before his death; Ewaine Gwynne has been working with a family of models of ‘random surfaces’ known as Liouville quantum gravity, which are too rough to be surfaces in the literal sense; and Clare Walker-Gore published a book called *Plotting Disability in the Nineteenth-Century Novel* a few weeks ago.

One of our Senior Postdoctoral Researchers, Srinjan Basu, is exploring the large multiprotein regulators altering genome folding as pluripotent stem cells differentiate, publishing a number of four co-first-author papers in top journals such as *Nature*. Meanwhile, JRF Hannah Shepherd is moving to the Department of History at Yale. Indeed, John Hinch, as Secretary of the Title A Committee, has been investigating where JRFs are now, and I am happy to report that ‘our future’ is looking rosy, judging from those he could track (almost all) from 2007 to 2016: 50 of 56 are in academia, three are in industry and one is a teacher working with the British Physics Olympiad, while two are lawyers.

You will not be surprised that when my appointment was made public a number of people told me their supposedly well founded views about our College. They were wrong about so much. I have found a College that is open, proudly supporting the best minds from around the world – men and now women, people of colour – a College which raised the LGBTQ+ flag for the whole of February to celebrate our inclusive approach. Indeed, 47% of our current UK offer-holders

are women. (The overall figure is skewed downwards as a disproportionately large proportion of our overseas applicants and offer-holders are men.) And 32% are from so-called ‘flagged’ backgrounds – that is, the ‘bottom 40%’ in terms of participation in higher education. This is not quite yet a wholly representative intake, but we are working towards that. And finally, 36% of our 2019 UK offer-holders are from ethnic minorities. Well done Admissions and the outreach team, led by Glen Rangwala.

I have seen how much we do, and I believe it is time we tell our story. From the successes I have highlighted to the everyday support we give to other Colleges and the University, from the great personal development projects for students (thanks to a donation made some years ago by Mr Dunlevie) to the conferences we support, from the scholarship of our Fellowship to the scholarships for the young. And our benefactors are supporting us on this journey. Thank you.

* * *

Some personal reflections. Of course, I wondered how it would be as the first Master to be an outsider and first woman. But as Philip Allott observes in *Trinity Minds* (2015): ‘In 1546 the King’s Hall and Michaelhouse became Trinity College The King’s Hall, cradle of public servants, and Michaelhouse, a private foundation by Hervey de Stanton for the education of clerics.....It (14th-century England) was a society in which the very idea of higher education contained the seeds of social change’. So, I do actually feel comfortable here, as I come from the public service – both as a doctor and the former CMO (where I was also the first woman, which was also the case when I was put in charge of Health Research). We, Trinity, must continue to germinate our ideas and participate as effective leaders of social change. Whether for gender, climate change or cutting-edge Maths, Science and Humanities, or by grappling with the many other grand challenges society must now face. We do have a social purpose.

My first experience of Trinity ‘full on’ was in April, a year ago, as Master Elect coming to celebrate the 40th Anniversary of the arrival of women students and Fellows. What a wonderful way to start – celebrating great women, and doing it in style. Thank you all for such a special introduction to College, one I will never forget. And particular thanks to the organisers: Mrs Ellie Davies (1999, Theological and Religious Studies), Founder and former Chair of the Trinity Women’s Network, who with Professors Poole and Widdis, and with Clare Walker-Gore and Fiona Holland, made it happen.

Willem and I arrived at the beginning of October, well in time for the start of Term and my Installation on 8 October. And, as we all know, the day was made even more memorable by the sharing of joy and celebration with Didier Queloz, on his award of the 2019 Nobel Prize for Physics. The ancient ritual of the Installation and the beautiful Te Deum, commissioned from one of our recent organ scholars Owain Park (2013, Music), made for a uniquely special day. Capped by a wonderful feast with special wines, as we experience here together this evening. My renewed thanks for such special memories to everyone who was involved.

And then we started the rollercoaster that term time is for the whole community of Trinity as I learnt my way round, both geographically and culturally. I have received many acts of real kindness. Let me share a few: from our Manciple, Mark, giving me a tutorial on how to pronounce the Latin grace (as I was massacring it) – only to be outdone by Philip Allott kindly sending me not only the translation but also the phonetic pronunciation.... I hope I'm doing better now, Philip; to the Chef and Manciple for taking charge and both cooking and then serving my 70th birthday dinner for me as a treat; and the kind Porter who approached me saying 'last week you asked the way to another College, so I've got a map for you so you won't get lost' and handing me an excellent map; I can report that I am now getting around Cambridge pretty well.

Not all is perfect: for instance, the Library overflows regularly and, surprisingly, we do not have modern study spaces as do many other colleges. And I am truly amazed that we can only bring together a whole undergraduate year by either moving these Great Hall tables back or by congregating in the Antechapel, which can be chilly. Also, the gym is frankly scruffy. Clearly, there is still work for this generation to do.

But, I was here on the sunny Sunday when we had The Great Court Run. I joined others at the wonderful Royal Academy Exhibition by our alumnus Antony Gormley (1968, History of Art) – I hope we can have another of his sculptures back in Trinity. Willem and I love the choir, regularly joining evensong, and enjoying the music more broadly. The gardens are beautiful. The food is wonderful and, despite Fellows' concerns – because I was responsible as CMO for the nation's 'Low risk Guidelines for Alcohol' – I am enjoying the fine wines too. One of the fun events I have hosted was a dinner for our Honorary Fellows. They came from as far afield as Tokyo and Princeton. We had a great evening

with the Officers of the College. It is wonderful to be here. My pleasure is visible to all. Thank you for putting your trust in me as Master.

Before moving on, I want to voice the sadness of our whole community at the wanton destruction of our front lawn. It will be replanted. But that demonstration highlights the current dislocation and unhappiness across our broader society and its inequalities.

We, at Trinity, are looking at how best to ‘green’ College, how to deliver on our duties as a charity that must maximise our income for our purpose of scholarship and balance this with considerations of Environmental, Social and Corporate Governance (ESG). I welcome how our students are engaging with Fellows to grapple with these issues through a Climate Change Working Group, societies, and discussion fora. A balance that our Senior Bursar has managed so very well. This is the last Commem for you Rory as Senior Bursar, and I want to thank you on behalf of Trinity for all you have done in being both strategic and growing our endowment.

We also must show the world that Trinity is truly global as a community: global in reach and globally competitive in our scholarship – both research and education. We are global but the winds of change mean we will all need to do more, probably even just to stay still.

* * *

I want to end with celebration of both beauty and openness, by reading an extract from the poem ‘Forty Names’ that this year won the Forward Prize for Best Single Poem. It is by Parwana Fayyaz, who is studying Persian Medieval Literature and is here in the Hall. Congratulations Parwana, and I wish we had time to read your complete poem. Parwana is from Kabul, and this is the story of forty women who jump off a cliff to preserve their honour. The poem speaks of a collective experience of struggle and sacrifice, and the young women’s ultimate response to these injustices, by choosing death with honour over survival with dishonour.

FORTY NAMES

by Parwana Fayyaz (2016, Asian & Middle Eastern Studies, PhD) who is attending the Feast

I

Zib was young,
Her youth was all she cared for.
These mountains were her cots.
The wind her wings, and those pebbles were her friends.
Their clay hut, a hut for all the eight women,
And her father, a shepherd.

He knew every cave and all possible ponds.
He took her to herd with him,
As the youngest daughter
Zib marched with her father.
She learnt the ways to the caves and the ponds.

Young women gathered there for water, the young
Girls with the bright dresses, their green
Eyes were the muses.

Behind those mountains
She dug a deep hole,
Storing a pile of pebbles.

II

The daffodils
Never grew here before,
But what is this yellow sea up high on the hills?

A line of some blue wildflowers.
In a lane toward the pile of tumbleweeds
All the houses for the cicadas,
All your neighbors.
And the eagle roars in the distance,
Have you met them yet?

The sky above through the opaque skin of
 Your dust carries whims from the mountains,
 It brings me a story.
 The story of forty young bodies.

III

A knock,
 Father opened the door,
 There stood the fathers,
 The mothers' faces startled.
 All the daughters standing behind them
 In the pit of dark night,
 Their yellow and turquoise colors
 Lining the sky.

'Zibon, my daughter'
 'Take them to the cave.'
 She was handed a lantern.
 She took the way,
 Behind her a herd of colors flowing.
 The night was slow,
 The sound of their footsteps a solo music of a mystic.

Names:

Sediqa, Hakima, Roqia,
 Firoza, Lilia, and Soghra
 Shah Bakhat, Shah Dokht, Zamaroot,
 Nazanin, Gul Badan, Fatima, and Fariba,
 Sharifa, Marifa, Zinab, Fakhria, Shahparak, MahGol,
 Latifa, Shukria, Khadija, Taj Begum, Kubra, Yaqoot,
 Fatima, Zahra, Yaqoot, Khadjia, Taj, Gol, Mahrokh, Nigina,
 Maryam, Zarin, Zara, Zari, Zamin,
 Zarina,
 At last Zibon.

IV

No news. Neither drums not flutes of
Shepherds reached them, they
Remained in the cave. Were
people gone?

Once in every night, an exhausting
tear dropped – heard from someone’s mouth,
A whim. A total silence again

Zib calmed them. Each daughter
Crawled under her veil,
Slowly the last throbs from the mill house

Also died.
No throbbing. No pond. No nights.
Silence became an exhausting noise.

V

Zib led the daughters to the mountains.

The view of the thrashing horses, the brown uniforms
All puzzled them. Imagined
The men snatching their skirts, they feared.

We will all meet in paradise,
With our honoured faces
Angels will greet us.

A wave of colours dived behind the mountains,
Freedom was sought in their veils, their colors
Flew with the wind. Their bodies freed and slowly hit

The mountains. One by one, they rested. Women
Figures covered the other side of the mountains,
Hairs tugged. Heads stilled. Their arms curved
Beside their twisted legs.

These mountains became their cots
 The wind their wings, and those pebbles their friends.
 Their rocky cave, a cave for all the forty women,
 And their fathers and mothers disappeared.

(Reproduced here with the kind permission of Parwana Fayaz).

And now, I ask you to please stand for the toast to our Benefactors: ‘In Piam Memoria Benefactorum.’”



Stephen Bond

Forward Prize winner Parwana Fayaz (2016).



ALUMNI RELATIONS & DEVELOPMENT

ALUMNI RELATIONS AND ASSOCIATIONS

ANNUAL GATHERINGS

ALUMNI ACHIEVEMENTS





Alumni Relations & Development



Dr Michael Banner, Chair of Alumni Relations & Development

The life of the College has this year been altered in ways which would have been inconceivable pre-COVID-19 but, despite the challenges of 2020, the Alumni Relations and Development Office has had a positive and busy year. Alumni all over the world have kept in touch with Trinity throughout, and have continued to support Trinity in numerous ways, for which we are tremendously grateful.

In September, we started the year with two flagship alumni events – Trinity Writers and TrinTalk. Trinity Writers was a splendid day celebrating some of the College’s finest literary talent, and our thanks go to Daisy Goodwin (1980), Alex Michaelides (1996), Hugh Thomson (1979) and Dr Bee Wilson (1992) for sharing their stories. For ‘TrinTalk: Global Responsibilities’ our expert panel, Andy Rubin (1984), Dr Amy Ludlow (2005), Professor Sadaf Farooqi (1995), and Dr Hugh Hunt (e1990), debated the many ways in which we can, individually and collectively, have far-reaching, positive impacts on the world. Another of the many live event highlights was ‘Antony Gormley at the Royal Academy’ – a very special private viewing of Sir Antony’s (1968) exhibition showcasing his 45-year career.

One silver lining to the COVID-19 cloud has been the development of our online events, enabling us to bring Trinity to you until we are able to bring you back to Trinity. We have been delighted that so many of you have joined us online for the Trinity Research Talks series, with Fellow speakers including Professor Rebecca Fitzgerald (e2002) on catching oesophageal cancer early, Professor Greg



Matthew Feast

Alumni exploring Sir Antony Gormley's Royal Academy exhibition.

Hannon (e2016) on lessons from studies of tumour heterogeneity, and Dr Alyce Mahon (e2000) on how art can break down barriers and the Marquis de Sade. We have plenty of plans in the pipeline so do keep an eye on the website and the newsletter for the latest event news and developments.

I feel particularly fortunate that I was able to meet with so many alumni before the pandemic curtailed international travel, and I was greeted with a very warm welcome on my trips to Boston, New York, California, Tokyo, Shanghai, Beijing, Singapore and Hong Kong. Thank you to everyone who hosts us and makes our events possible, and I very much hope that my colleagues and I will be able to resume overseas travel and events in 2021.

As you will read in the reports that follow, our alumni groups and associations have also been determined to keep going, which has only been possible thanks to the commitment and hard work of our volunteers. Trinity in Japan has had a very successful recent run of online events, with speakers including Lord Martin Rees (1960) and Professor Venki Ramakrishnan (e2008), and I hope you will have seen the article in the summer edition of *The Fountain* by the group's Chair, Dr Gerhard Fasol (1978). We are also pleased to announce the forthcoming launch of Trinity in New York, so if you are interested in joining, or signing up for any other of our groups, do register your interest via email: alumni@trin.cam.ac.uk.

There have also been a number of changes within the Alumni Relations and Development Office team. Amy Trotter, Executive Director of Alumni Relations and Development, departed Trinity in June to join the University's Development Office as Director of International and Regional Programmes. At the end of May we said a fond farewell to Lynne Isaacs, our Gifts and Database Coordinator, who retired after 13 years with ARDO, but we are delighted to have welcomed Hannah Courtney to the team as Gifts and Database Coordinator.

Over the last financial year we raised more than £2m, vital income that makes a huge difference to what the College can do. More detail will follow in our *Annual Report* but just some of the ways in which your gifts are helping include boosting our studentships and bursaries, expanding our important access initiatives and supporting the Boat Club, Choir and the Wren Library. We are truly grateful, and your support will be more important than ever as we navigate the difficult waters ahead.

Whatever 2021 may bring, we are looking forward to turning the page on a new year. Trinity has plenty of alumni activities planned to keep everyone connected, so we do hope that you will get involved with our events and initiatives. It has been wonderful to hear from so many of you over recent months so if you have any ideas or suggestions do share them with us. Please look after yourselves, and the team and I send our very best wishes to you all.

Alumni Associations



Trinity First and Third Association Tony Pooley (1964), President

The First and Third Association is open to all alumni who enjoyed rowing whilst up at Trinity and who wish to maintain contact with past, and also present, members of the First and Third Trinity Boat Club. The Association exists to support the Club both financially and practically. Socially, but currently subject to restrictions imposed by the COVID-19 pandemic, the Association holds a black tie Biennial Dinner in College, usually attended by about 150 alumni (this year's dinner was planned to be held on 26 September, but has been postponed provisionally until 28 August next year); a gathering in London every first Tuesday of each month for drinks and supper at 'Ye Olde Cheshire Cheese' in Fleet Street; and an annual drinks event on the Saturday of Henley Royal Regatta (usually the first week in July every year).

A now well-established Steering Committee of alumni and current Boat Club Captains seeks to further the progress of both the Boat Club and the Association by agreeing development strategies, the degree to which the Association can assist in funding the Boat Club and generally strengthening the bonds between current Club members and alumni. Please do get in touch if you want to be involved with this, or to offer support.

Since March this year all rowing and social events have been badly affected by the COVID-19 pandemic. College rowing and the Mays were abandoned in the Easter Term. Henley was cancelled and, as mentioned above, the Association's Biennial Dinner has been provisionally postponed until 28 August 2021. We hope that events will return to a post-pandemic 'normal' well before then.

The President of the Association is Tony Pooley (1964), who succeeded David Jones (1958) in September 2018. Rich Dewire (1996) and Thomas O'Neil (2006) are the Association's Co-Chairs.

You can contact the Association via email assoc@firstandthird.org or the website www.firstandthirdassoc.org.



Trinity Business and City Association Ihab Makar (1979), Chair

TBCA's mission is to provide members with thought-provoking events and social mixing, allowing networking, fostering mentoring, and creating an informal yet strong community.

One of the Association's key activities is the Distinguished Speaker Series, which has gone from strength to strength in providing a series of very senior speakers, and in a format which allows speakers to talk informally and candidly, and welcomes an audience which is not afraid to challenge them vigorously in the post-conversation Q&A. The philosophy of the series is to avoid the standard formal CEO interview focused on the company's prospects, and instead gain insight on the guest's thought processes and how they have wrestled with difficult episodes, decisions and challenges; both the successes, and the failures.

In that spirit, in the first meeting of the new academic year in September, Bernard Mensah, President of the Bank of America Merrill Lynch EMEA, was asked, 'What was the biggest mistake you have ever made?'. He was very honest in his reply, and throughout the discussion was very candid about the challenges he faced. It would have been much easier to talk about the bank's successes, having recently been awarded the accolade of "The World's Best Bank" by the industry's journal, *Euromoney Institutional Investor*.

October's guest was Tim Davie, then CEO of BBC Studios and now Director-General of the BBC. The BBC has no shortage of major challenges, one of the most serious being the success of streaming entrants such as Netflix, Amazon Prime, and several others with very deep pockets. Their entry has caused significant viewer haemorrhage from the BBC. This is a particularly serious problem as, with a significantly smaller viewership, the BBC's bargaining position with the government on the licence fee is substantially weakened. Like Bernard Mensah, Tim was candid and under no illusions about the difficulties the BBC faced, and was clear the BBC would have to reform substantially to survive.

Our next guest in the Distinguished Speaker Series was Jes Staley, Group Chief Executive of Barclays. Previously, at JP Morgan he had risen to become head of investment banking, and he recounted his experiences there. He

moved to Barclays at a critical moment in its development, in the midst of a public debate on whether it should exit investment banking, made more acute by a high-profile activist investor. Jes made the case for continuing in investment banking and has carried the shareholders with him. He also spoke with passion about his commitment to gay rights, a Damascene conversion which came about when his brother told him in the 1980s that he was gay and had AIDS. His brother fortunately survived, but the episode forced Jes to reconsider his own beliefs.

In November 2019 the Association held an event on the theme of entrepreneurship at the Bradfield Centre, the Trinity-funded incubator in the Cambridge Science Park. TBCA played a role in helping prepare the ground for the foundation of the Centre, undertaking strategic analysis and international academic incubator benchmarking to support the College and the Senior Bursar.

The three panellists were Ian Tomlinson (1987) Chair of Apollo Therapeutics, a biotech startup, Tom Macura (2004), COO at WiseAlpha, an investment products startup, and Graham Schwikkard, CEO of SyndicateRoom, a platform for startup investing. The panellists spoke about the challenges of creating a startup, but also of the visions and motivations that drove them. Although working in very different sectors, the similarities in the challenges and motivations were as striking as the differences.

The event was attended by the Master, Dame Sally Davis, who was also the guest of our last Distinguished Speaker Series conversation of the 2018–19 academic year, shortly before assuming the Mastership. In both its focus on entrepreneurship and being held in Cambridge, the event was the start of a new initiative for TBCA of Cambridge-based entrepreneurs, tapping into the “Cambridge Cluster” as a unique hotbed of entrepreneurial activity. That initiative is led by Alex Barrett (1986), a TBCA committee member based in Cambridge, who led the complex organisation involved in this highly successful event.

Two further linked initiatives currently being developed are the ramping up of TBCA’s mentoring and networking capabilities, led by committee members Peter Cui (2004) and Emmanuel Soquar (1999) respectively, working in collaboration. The development of Trinity Members Online (TMO) is an opportunity to make connections between alumni who can mentor and those who seek mentoring, specifically career advice.

In common with other College Alumni Associations, we have had to suspend our events during the current pandemic. Once the pandemic is behind us, we will pick up where we left off, and look forward to welcoming members back.



The Trinity College Choir Association Douglas Paine (2000), Chair

The Trinity College Choir Association is open to all former members of the College Choir and organ scholars, although it holds and supports events that may be of interest to alumni outside these groups who appreciate the College Choir or choral music more generally.

In May 2020, the Association was honoured to be told that HRH The Prince of Wales (1967) has agreed to extend his Presidency for a further five years to 2025. We are very grateful to His Royal Highness for his continued patronage.

We were also grateful for a message of support from HRH to members of the Association who have been affected by the COVID-19 pandemic. All Members of College will have been affected to some degree, but many members of the TCCA are professional musicians whose livelihood and way of life have faced unprecedented challenges in recent months. TCCA members have worked hard to keep music-making going, in whatever ways they can.

Before COVID-19 took hold, the TCCA was enjoying another successful year of events. On 2 December 2019, the Trinity College Alumni Carol Service was held at Temple Church in London. As in previous years, the TCCA provided the choir, organised by Tom Dupernex (2000) and directed by Mike Waldron (2006), and members of the TCCA Committee assisted the Alumni Office with the arrangements. The Alumni Carol Service goes from strength to strength: this year, which was the tenth anniversary of the service being established, saw nearly 350 alumni and guests attend the service, together with the Vice-Master, and many stayed for wine, mince pies and good company after the service. Some £1,700 was raised for Trinity in Camberwell. The 2020 service will not be able to go ahead in its usual form but it is hoped that the College and the TCCA will be able to bring some seasonal cheer via virtual methods. Of course, the Alumni

Office will keep alumni updated on developments for 2020 and we very much hope to be in a position to welcome you to an Alumni Carol Service in 2021.

On 10 February 2020, the TCCA held a drinks evening at Daly's Wine Bar in London. This was another enjoyable and well-attended event, with around 40 attendees and good representation across the years (particularly more recent generations, from 2010–15). At the time of writing it is unclear whether anything similar can be organised for 2021, but if conditions allow it a similar event will be planned. Any members with suggestions for future events are encouraged to contact the Committee.

The TCCA ordinarily provides a choir (of past members of the College Choir) to sing at Annual Gatherings when the present College Choir is not in residence or is unavailable. That has not happened this year since the relevant Gatherings have had to be postponed, but it is hoped the tradition will resume. If any former Choir members would like to sing at future Annual Gatherings, please contact the Music Administrator, Eleanor Lancelot (music.administrator@trin.cam.ac.uk).

With the help of the Music Administrator, the TCCA issues a regular newsletter to TCCA members, which is also available on the College website: www.trin.cam.ac.uk/chapel/tcca/tcca-newsletters. The most recent issue was in July 2020. Details of TCCA events and other matters that may be of interest to TCCA Members are also posted on the TCCA's Facebook page.

Any former members of the Choir who do not receive communications from the TCCA, but who wish to do so, should contact the Alumni Office at alumni@trin.cam.ac.uk.



Trinity Engineers' Association
Amanda Talhat (2006) &
Christie Marrian (1970)

It has been a trying 12 months for the Trinity Engineers' Association. Following a successful Michaelmas Term meeting in October 2019, crossed wires meant the Lent Term meeting had to be cancelled. Then the pandemic hit, putting paid to our summer plans. However, hopefully

by the time you read this we will have had our first one (or two) virtual TEA meetings hosted on Zoom with the help of the College's Alumni Events team. This is an opportunity to connect with TEA alumni who do not have access to our regular meetings, which have, to date, been held in and around Trinity College in Cambridge. Working our traditional focus on informal mentoring into a remote meeting format is a challenge but, again, is an opportunity to increase the pool of alumni who are keen to provide the wisdom of their engineering career experiences to the next generations of Trinity Engineers.

The Michaelmas Term 2020 meeting on Friday 23 October looked at the key role that engineers play in dealing with national emergencies. The first session was by Dr Hugh Hunt (e1990) focusing on how Trinity, Cambridge and the Engineering Department are approaching the education and accommodation of students during the COVID-19 pandemic, many of whom are away from home for the first time. Dr Shaun Fitzgerald (Girton College) described the approach to reopening public facilities, particularly on how they can best be made safe for multiple person occupancy. Both topics were excellent examples of the type of multi-variable problem with incomplete information that engineers are trained to deal with!

On behalf of the TEA Committee, we would like to express our appreciation for the invaluable support from the Master, Fellows and Engineering DoS of Trinity, along with Phil Pass and his team in the ARDO.



Trinity Golf Society
Peter Larkin (1964), Chair

The Trinity Golf day is held each year in June, and it is a great opportunity to meet and play golf with fellow alumni. This year's meeting was due to be held at Royal Worlington and Newmarket Golf Club, followed by dinner at Trinity, but sadly had to be postponed due to the COVID-19 pandemic.

Restrictions on golf meetings are currently being progressively lifted. We hope that by next year the situation will have further improved, enabling us to arrange events once again.

We also enter a team of six for the annual Inter-College Cambridge Alumni Golf Competition, held at the Gog Magogs Golf Course in April. Anyone interested in participating in future (maximum handicap 18) should contact the Alumni Office with details of their handicaps/club membership/experience.

The Society would be delighted to welcome new members – we are open to all alumni who play golf. Being a member of a golf club or holding a recognised current or past handicap is not a requirement so if you would like to join the Society or have any questions please do contact us via the Alumni Office at alumni@trin.cam.ac.uk. Members are able to invite a limited number of guests.



Trinity Law Association Andrew Walker QC (1987), Chair

The Trinity Law Association (TLA) was the first alumni association with a mentoring scheme and it remains a core focus. This year a record 20 Trinity students were matched with mentors in areas stretching from international humanitarian issues and criminal law, to commercial and intellectual property law. We are always keen to add to our database of mentors in order to be able to offer students a mentor with expertise in their preferred area of law. If you wish to find out more about the scheme and how you could help, please contact Rachel Avery (1998), the scheme coordinator, at avery@devchambers.co.uk

Our aim of supporting current students was also at the heart of our first event for 2019/20. Those looking to explore a career in the profession face ever more questions and decisions as to how to go about it. Both we and the law Fellows saw a need and an opportunity to demystify the routes into the legal profession, and to reduce some of the seemingly ever-increasing stress and worry about this among current students. With those twin aims in mind, four recent graduates – Jamshed Bilimoria (2010), Carrie Gothard (2014), Becky Hadgett (2010), and Laura Wright (2010), the first three all TLA committee members – formed a panel in the Junior Parlour last October to reflect on their own experiences, and to answer questions from students of all disciplines.

The event was a great success – very well attended by students who were just about to embark on their applications for summer 2020 placements (since somewhat curtailed), and full of fantastic advice and frank personal stories from the panel. I shall spare the blushes of the panel member who candidly related a series of catastrophic attempts, but it made the advice and reassurance available so much richer (especially from someone who has since more than “made it”). With new vocational courses for both solicitors and barristers about to add another layer of complexity, we are keen to repeat the event, potentially on a regular basis. My thanks go to all involved.

The committee is keen to build on this, supplementing other work already done by the College to widen access to the study of law at Cambridge. Recent graduates Laura Wright (again) and Dominic Pugh (2013) hosted a session as part of the College’s Law Residential in Summer 2019, and, despite the lockdown, the Fellows and the outreach team managed to put together a first Virtual Law Taster day this year, with participation from that most illustrious stalwart of the Trinity legal community, Lord Walker of Gestingthorpe (1955).

Sadly, we had to cancel our planned November 2019 event at the last moment and plans for 2020 have been put on hold, with most of the legal profession locked down at home since March and few anticipating a regular return to the office any time soon. The success of the Virtual Law Day shows what can still be done, though, and we will shamelessly look to benefit from the lessons learned by the College in looking to make online plans for ourselves. But some things may have to give: even with best efforts, it will be difficult to replicate our regular (and hugely popular) biennial dinner in College in March 2021 if we are still unable to gather in one place.

I took the opportunity this year to write on behalf of the Association to congratulate all new Trinity Queen’s Counsel, and I am delighted that there were so many such letters. I wish our new silks every success in the years ahead. We also congratulate TLA member and great supporter Sue Carr (1983) on her elevation to the Court of Appeal.

I am very grateful once again for the unstinting support given by all TLA committee members, by Phil Pass in Alumni Relations, and by the College law Fellows – most especially Jo Miles (e1999), without whom we simply could not function. Finally, congratulations go to TLA committee member HHJ Angela Rafferty QC (1989) on her appointment to sit at the Old Bailey, keeping up the

Trinity representation in our top criminal trial court following the retirement of our former chair, HHJ Peter Rook QC (1967).



**Trinity Medics' Association
Dr Tony Hulse (1967), Chair
and Dr Emma Cox (2010),
Communications Officer**

Trinity Medics' Association (TMA) was relaunched in 2019, and is open to any College alumni who have studied

Medicine at Trinity or elsewhere. The Association exists to support and foster relationships between current College medical students and alumni.

Following last year's tremendous relaunch talks and dinner in College, we were greatly looking forward to the Medics' Dinner planned for 28 March 2020, which sadly had to be postponed due to the COVID-19 situation and because so many of our members were fighting on the frontline. The Committee will continue to plan activities for when the situation improves.

In the meantime, we would be delighted to welcome new members. If you would like to join us, please do contact the alumni office: alumni@trin.cam.ac.uk. You can follow the Association on Twitter @MedicsTrinity.



Master, Dame Sally Davies and her husband, Professor Willem Ouwehand, leading the Trinity clap for carers, April 2020.

David Colver (Christ's 1977)



Trinity Women's Network Dr Kimberly Schumacher (1989), Chair

The Trinity Women's Network was established over five years ago and has nearly 350 members. We aim to support Trinity alumnae through mentoring, networking and events, spotlighting Trinity's many distinguished female graduates. We enjoy assisting and inspiring current female undergraduates and postgraduates in their chosen studies and careers. The TWN encourages women's initiatives in other colleges and across the University.

The Trinity Women's Network warmly welcomes all Trinity alumni, anywhere in the world. To join, please email alumni@trin.cam.ac.uk. You are also invited to join the Trinity Women's Network Facebook page: www.facebook.com/groups/TrinityWomensNetwork. We would be delighted if you wished to join the Committee, as well, bringing fresh ideas. TWN conducts online committee meetings, to convene from any location.

The TWN is beginning a new initiative in mentoring. Utilising the Trinity Members Online platform, our members will deploy their extensive and diverse experience to mentor alumni at all stages of their careers. In concert with the College, we will



TEA/TWN STEM
mentoring sessions,
October 2019.



The alumnae STEM panel and audience.

also mentor students. The TWN values the opportunity to encourage bright young minds with our years of experience and variety of career paths.

The Trinity Women's Network is evolving with its members and the times: our 2021 plans are to engage members with online events. The TWN aims to appeal to the many professions and interests of its members and provide a forum for conversations with Trinity alumni. The importance of one generation helping another is very important, particularly now.

Looking back over the past year, one highlight for the TWN in 2019 was Dame Sally Davies becoming the new Master. Many viewed this milestone through the lens of their own time at Trinity, agreeing collectively that the College made an outstanding appointment.

The TWN continues to collaborate with our fellow alumni associations. In October 2019, we worked with the Trinity Engineers' Association on a successful undergraduate STEM mentoring event in the Master's Lodge. It concluded with a lively discussion with distinguished Trinity alumnae: Dr Farah Alibay (2006), Dr Barnali Ghosh (1999), Dr Rachel Cook (1996), and Professor Joan Lasenby (1978). Thanks to the panel's experiences, humour and camaraderie, the discussion was engaging to both undergraduates and those established in their careers.



Trinity in China Alan Babington-Smith (1965) and Yang Xia (2003), Co-Founders

It has been an exceptionally memorable year for China, and doubtlessly our members here. Since three days right before the Chinese New Year 2020,* the country had been immersed in a wave of fright due to the COVID-19 pandemic, unknown at that time to the entire world. On the level of non-pharmaceutical interventions, the Chinese experience was based on maximal self-quarantine and minimal contact, somewhat of a social experiment of collective awareness. For this reason, our members have not been able to organise any events offline since the last alumni gathering in October 2019, welcoming The Revd Dr Michael Banner from the College. However, people were thinking of each other, sharing useful

resources and helping where we can. For instance, members donated facemasks at the peak of shortage and hardship, including a shipment of 3M respirators to the University of Cambridge on behalf of its Chinese alumni. Professor Yang Xia also published in academic journals, to advocate for effective measures of workforce survival during the global pandemic. We are in this together, and will keep calm and carry on.



* According to the Chinese horoscope, this is the Year of Metal Rat, which comes around every 60 years, and throughout China's history often coincides with a harbinger of disaster.

Yang preparing donations for shipment.



Welcoming Dr Michael Banner in October 2019.

Alumni interested in joining the group are invited to contact the two organisers of Trinity in China as follows:

Yang Xia – Email: biochemistrier@hotmail.com, WEIXIN: CB21TQ

Alan Babington-Smith – Email: alanbs100@outlook.com, WEIXIN: alanbsbj



**Trinity in Hong Kong
Clockwise from left,
Tzo Tze Ang (1997),
Dominic Chan (1988),
Jessie Zhang (2001) and
Tong Zhao (2008), Co-Founders**



Trinity in Hong Kong was formed in October 2018, with the purpose of connecting alumni based in Hong Kong and welcoming any Trinity members who may be passing through. Unfortunately, the pandemic meant that we had to postpone plans for gatherings this year, but please

do contact us if you would be interested in joining us once we are able to resume activities.

If you would like to join the group please email the Alumni Office via alumni@trin.cam.ac.uk and sign up to our Facebook group: www.facebook.com/groups/trinityinhongkong/.



Trinity in Japan **Dr Gerhard Fasol (1978), Co-Founder and Chair**

Six years ago, I founded Trinity in Japan with the help of Lord Martin Rees whom I know since my PhD days at the Cavendish Laboratory. With enthusiastic help from Trinity Fellows and members, and the wonderful Trinity Alumni Office, we have built a steadily growing community. Five to fifteen of us meet for dinner about once a month.



The UK and Japan are both large, developed countries with a strong intellectual, research and industrial basis – but far apart in both language and geography. The connections between UK and Japan are not as developed as they could be so I am growing Trinity in Japan as a bridge linking UK and Japan, for Trinity members. Moderated, open and reaching out – not exclusive. I am continuously experimenting with new models for Trinity in Japan to create bigger positive impact. During 2019/2020 I started to plan a number of talks by Trinity members visiting

29 September 2019 – Meeting Mike Tehranchi, Trinity College Fellow and Director of Studies in Mathematics.



1 October 2019 event with The Revd Dr Michael Banner: 'The rise (and fall?) of humanitarianism'.

Japan, timing our meetings to match travel plans of visitors. We organised six such meetings with visitors. We had to switch a seventh planned conference meeting online due to the coronavirus crisis. This would have been a history and archaeology festival with Dr John MacGinnis (1982) on excavating a provincial capital of the Assyrian Empire introduced by Dr Chikako Watanabe (1990).

At the end of September 2019 I met with Dr Michael Tehranchi (e2005), Trinity Fellow and Director of Studies in Mathematics, who had visited Tokyo for a workshop on Quantitative Finance. At the beginning of October 2019, Dr Michael Banner (e2006) gave us a passionate talk on "The rise (and fall?) of humanitarianism". Towards the end of October automotive industry veteran Wolfgang Ungerer (1990) gave us his insights on the future of mobility and cars. In November 2019 we sat down with His Honour Judge Witold Pawlak (1966), Circuit Judge at Wood Green Crown Court, who explained his "view from the Bench". With no experience with courts (maybe fortunately), I was fascinated to learn about the judges' disease, "judgeitis", a term ascribed to Lord Hailsham, and reflecting the hierarchy in courts with judges at the top, and the importance of trust: barristers who win the trust of judges have better chances to win their cases. Alumni of MIT Sloan Business School joined us. Ambassador Ra (1967), former Director of South-Korea's National Intelligence Service, then South Korean Ambassador to the UK and to Japan joined us for our Christmas dinner 2019.



28 November 2019, His Honour Witold Pawlak, Circuit Judge: 'The view from the Bench' – joint with MIT Sloan alumni.

The coronavirus crisis forced a five month break in our in person meetings. Fortunately infection rates are fairly low in Japan compared to many other countries, so at the end of July 2020 we re-started our face-to-face meetings. On 31 July 2020, Lord Martin Rees (1960) very kindly agreed to join us via video to discuss Trinity, astronomy and his work on existential risks facing humanity. On 28 August 2020 Professor Venki Ramakrishnan (e2008), Nobel Prize winner 2009 in Chemistry and currently President of the Royal Society, very generously agreed to join us for a video discussion. I have uploaded recordings to our website <https://trinityjapan.org/>

Video discussions at our in person meetings arose from the virus crisis. Trinity Fellows and members globally who are interested in holding video discussions with us here in Tokyo are very welcome to contact me. I am deeply grateful for two of Trinity's most distinguished Fellows for pioneering our new video meeting model.

We welcome all Trinity Fellows and members at Trinity in Japan, please contact me at fasol@eurotechnology.com or via: <https://trinityjapan.org/contact-2/>

Gerhard Fasol founded Trinity in Japan in 2014. Gerhard did semiconductor electronics research at the Cavendish and at Trinity for his PhD, and won a Trinity Research Fellowship, during which time he first visited Japan back in 1984 to build research cooperation with NTT Research Labs on semiconductor electronics. He then became a tenured Lecturer at the Cavendish Laboratory and Teaching Fellow and Director of Studies at Trinity, and was a Founding Manager of the Hitachi Cambridge Laboratory. He is now an entrepreneur in Tokyo, building the Japan business for a UK based bio-pharma venture in the field of regenerative medicine, building a Science/Industrial Park in Japan, building the Ludwig Boltzmann Forum as a global leadership forum, as well as several other projects. Read more about Trinity in Japan and its background in *The Fountain*, Issue 29, Summer 2020, page 12–14: www.trin.cam.ac.uk/alumni/publications/the-fountain/



Trinity in New York Christos Koutsoyannis (1998)

We are excited to announce the upcoming launch of the new alumni group *Trinity in New York* (TCNY).

The group will aim to bring together alumni based in the broader tri-state area (New York, New Jersey, Connecticut), as well as alumni who might be travelling through New York, via regular social events and visits from Trinity Fellows. We will aim to cover topics of interest to both professionals and academics.



@next_voyage

Following the Trinity College Choir concert in New York on Sunday 15 September 2019 at the church of St Ignatius Loyola and the accompanying reception at the Harvard Club, the *Trinity in New York* group is aiming to launch with a visit from the Master, Dame Sally Davies, subject to the resumption of regular air travel.

If you wish to join the group, or if you have ideas for events and initiatives and are interested in joining the Committee to help shape the group's activities, we would be delighted to hear from you. Please get in touch with the Alumni Office to register your interest: alumni@trin.cam.ac.uk.

Dining Privileges

*** At the time of writing, the College is closed to visitors for the foreseeable future but we hope to be able to welcome back our alumni in 2021 when the details below regarding Dining Privileges will apply. Please keep an eye on the website and the alumni newsletter for the latest news.**

The College is pleased to welcome back Members of the College on up to four occasions per year to dine at High Table, at no charge. Wine may be taken in the Combination Room following dinner, also at no charge.

To be eligible to take advantage of these Dining Privileges you must either:

- have Matriculated and completed a BA degree at Trinity and hold the status of (or be eligible to be awarded) the Cambridge MA;

or:

- have Matriculated and completed the minimum of a one-year course (e.g. MLitt, MPhil, PhD), and be at least six years and one term since your Matriculation.

Please note:

- There are likely to be a number of occasions each year on which MAs cannot be accommodated in this way – e.g. special dinners or other College events.
- Out of term time, High Table may, unfortunately, be cancelled at relatively short notice due to a small number of Fellows dining that day. Any cancellations will be communicated with as much notice as possible.
- For reasons of space, MAs may not bring guests when exercising their Dining Privilege. Once per year, an MA may apply for the Vice-Master's permission to bring (and pay for) a guest.
- Again, due to limited space, there are a limited number of places available each day. We regret that groups numbering greater than six in size will not be able to dine using their MA Dining Privileges (if larger groups would like to dine in College, please contact catering.bookings@trin.cam.ac.uk to find out more about available packages).

Dinner is at 8pm during Full Term and at 7.30pm in vacation; sherry is available in the Fellows' Parlour half-an-hour beforehand.



If you wish to dine, please enquire with the Catering Office for availability, either in writing (The Catering Manager, Trinity College, Cambridge, CB2 1TQ) or by email (catering@trin.cam.ac.uk) or by telephone (01223 338547 between 9am and 4pm, Monday to Friday).

Please also let us know if there are any Fellows whom you would particularly like to meet when you come to dine (although, of course, we cannot guarantee that they will be able to dine on the night when you come).

Please note that a gown should be worn only by those MAs who are resident in Cambridge.

Annual Gatherings

In 2020 Trinity expected to host Annual Gatherings for matriculation years 1968–1971, 1996–1998, and 2008–2010, but sadly the celebrations had to be postponed due to the pandemic. The College has now rescheduled the three Gatherings for dates in 2021, which are detailed below. In summer 2021 we will also be welcoming back matriculation years 1965–67. Unfortunately, this means we have had to reschedule the Gatherings for 1972–75 and 1999–2001 previously advertised from 2021 to 2022.

17 July 2021	1996, 1997, 1998 (rescheduled from 2020)
21 July 2021	1968, 1969, 1970, 1971 (rescheduled from 2020)
11 September 2021	2008, 2009, 2010 (rescheduled from 2020)
15 September 2021	1965, 1966, 1967

We very much hope that events scheduled for 2021 will be able to go ahead but please note that all events are still subject to official Public Health guidelines, and changes may still be made. Please keep an eye on the website for the latest event news: www.trin.cam.ac.uk/alumni



Ian Olsson

Alumni Achievements 2019–2020

The date given as the date of matriculation is the date of first entering the College, either as an undergraduate or advanced student.

- 1992 **A O Adeyeye** Appointed Principal of Trevelyan College, Durham University, and Professor of Physics, 2020.
- 1989 **A H F Armstrong** Appointed host of Classic FM's weekday morning show, 2020.
- 1979 **S C Askham** *This One is Special*, 2020.
- 1965 **J A J Barbara** British Blood Transfusion Society (FBBTS) Lifetime Fellowship, 2020.
- 1991 **R J Barnwell** BAFTA TV Awards 2020: Current Affairs; International Emmy Awards: Current Affairs 2020; Prix Italia, TV Documentary and Signis Special Prize 2020; Journalist of the Year, and Foreign Affairs Journalism, British Journalism Awards 2019.
- 2003 **M C Bevan** *The Divine Muse*, 2020.
- 2012 **A M Bocse** Appointed as advisor to Department of Climate and Sustainability, Romania.
- 1963 **P Bottomley** Father of the House of Commons, 2020.
- 1971 **M R Brinkley** *The Housebuilder's Bible*, 2019.
- 1983 **S Carr** Appointed to High Court of Justice, 2020.
- 1998 **S Case** Appointed Cabinet Secretary and Head of Civil Service, 2020.
- 1972 **M B Cashman** *Brexit's A Trick, Not A Treat?* 2019.
- 1980 **J R Coe** Costa Fiction Prize 2020 for *Middle England; Mr Wilder and Me*, 2020.
- 2008 **E M Cory** *BEYOND: The Frozen Future*, 2020.
- 1968 **R E Cuthbert** Elected a Fellow of the Academy of the Social Sciences, 2019.
- 1984 **W B H Dalrymple** *The Anarchy: The Relentless Rise of the East India Company*, shortlisted for Cundill History Prize 2020.
- 1964 **L Damrosch** *The Club: Johnson, Boswell, and the Friends Who Shaped an Age*, 2019.

- 1993 **J de Swaan** *Seeking Virtue in Finance: Contributing to Society in a Conflicted Industry*, 2020.
- 1984 **S C J Denyer** 2020 Pulitzer Prize in Explanatory Reporting, for a *Washington Post* series on climate change.
- 1964 **C H B Dorin** Appointed Secretary-General of the Franco-British Union of Architects, 2019.
- 1990 **V H Dowd** *The Smart Woman's Guide to Murder*, 2020.
- 1975 **C I Dytor** Ordained Deacon, 2019. Ordained to the Catholic Priesthood, serving the Archdiocese of Birmingham, 2020.
- 1971 **J P Farwell** *Information Warfare*, 2020.
- 1986 **V G Ford** Appointed Minister for Children and Families, 2020.
- 1999 **B Ghosh** Top 50 Women in Engineering: Sustainability Award 2020, Women's Engineering Society (WES).
- 1996 **J Gill** Appointed First Tier Tribunal Judge, 2019.
- 1994 **J R Gog** Rosalind Franklin Award and Lecture 2020, Royal Society, for achievements in the field of mathematics. OBE for services to Academia and the COVID-19 response, 2020.
- 1985 **S J Greenhalgh** Appointed Minister of State for Building Safety and Communities in MHCLG, and Fire Minister, House of Lords, 2020.
- 1994 **R H Hadfield** James Joule Medal of the Institute of Physics 2019; elected Fellow of the Royal Society of Edinburgh, 2019.
- 1958 **M Hamer** *Drawn to Death*, 2020.
- 1971 **J T Harris** Appointed President of the Institute of Strategic Risk Management, 2019.
- 2003 **M M Hoffman** Promoted to Associate Professor of Medical Biophysics and Computer Science, University of Toronto.
- 1992 **T J W Hunt** *The Lives of the Objects*, 2019.
- 2003 **E S Jackson** 2019 John M. Eisenberg Patient Safety and Quality Award, The Joint Commission & The National Quality Forum, USA.
- 2014 **P Juhász** Appointed to the Most Venerable Order of St John, 2019.
- 2007 **C J King** Elected Fellow of the Royal College of Ophthalmologists.

- 1972 **C N F Kinsky** Appointed Chair of the Governing Board of St Augustine's Catholic College, Trowbridge, 2019.
- 1971 **O L Krivanek** Awarded the Kavli Prize in Nanoscience, 2020.
- 1993 **G M Leadbetter** Appointed Professor of Poetry, Birmingham City University 2019. *Maskwork*, 2020.
- 2014 **E Leinarte** British Academy Postdoctoral Fellowship 2020.
- 1973 **E E Lemcio** *The Way of the Lord: Plotting St Luke's Itinerary. A Pedagogical Aid*, 2020.
- 1972 **C Lenon** *Zero Carbon Our Choice*, 2020.
- 1976 **S B Lyon** Elected Fellow of the Royal Academy of Engineering 2020. European Corrosion Medal of the European Federation of Corrosion.
- 1988 **B S J Masters** Elected to the Maersk Board of Directors, 2020.
- 1967 **D F Mayor** Visiting Fellowship in the School of Health and Social Work, the University of Hertfordshire, 2020.
- 1998 **R M E McLaughlin** *Confronting Christianity: 12 Hard Questions for the World's Largest Religion*, 2019. Winner in Christianity Today's Book of the Year Awards 2020, Apologetics / Evangelism category.
- 1996 **A G Michaelides** Good Reads Choice Award 2019, Best Mystery and Thriller category, for *The Silent Patient*.
- 1975 **C H Moore** Appointed to the House of Lords, July 2020.
- 1974 **B Morris** *The Thirty-Year Genocide, Turkey's Destruction of its Christian Minorities, 1894–1924*, 2019.
- 1991 **T Myint-U** *The Hidden History of Burma: Race, Capitalism, and the Crisis of Democracy in the 21st Century*, 2020
- 2001 **J P O'Dwyer** Radcliffe Fellowship, Harvard University, 2020–21.
- 1952 **R J O'Neill** Grand Decoration of Honour in Gold, for services to Austrian-British relations.
- 1989 **R T Osman** *The Thursday Murder Club*, 2020; *Richard Osman's House of Games*, 2019.
- 2013 **O Park** Album 'Fading', The Gesualdo Six, released April 2020.

- 1977 **S J Paterson** MBE for services to the community in North East Scotland (Aberdeenshire), 2020.
- 1979 **D P E Reindorp** Appointed Representative Deputy-Lieutenant for the Royal Borough of Kensington and Chelsea, 2019.
- 1965 **G B Rodgers** Conference President for the 61st Annual Conference of the Indian Society of Labour Economics Patiala, Punjab, 2019.
- 1972 **R N Shapiro** Elected Chair of the Board of Governors of the Handel and Haydn Society, 2020.
- 1988 **S Singha** *Future Healthcare Design*, 2019.
- 1979 **A M Singhvi** *From The Trenches: India's Top Lawyer On His Most Important Cases*, 2020.
- 2003 **C J Standley** *Coronawho?* 2020.
- 1989 **T J Taylor** *Rise of the Self-Replicators: Early Visions of Machines, AI and Robots That Can Reproduce and Evolve*, 2020.
- 2000 **H O C Watt** *To the Lions*, 2019. Winner of the Ian Fleming Steel Dagger 2019, Crime Writers' Association.
- 2001 **R E Watts** *Red Gloves*, 2020.
- 1970 **R G Whelan** *Shakespeare Spelt Ruin: The Life of Frederick Balsir Chatterton, Drury Lane's Last Bankrupt*, 2019.
- 1968 **J H Williams** *Fundamentals of Applied Dynamics*, December 2019. *Wave Propagation: An Introduction to Engineering Analyses*, 2019.
- 1959 **T H V Williams** *Shepherds, Sheep, Hirelings & Wolves: An Anthology of Christian Currents in English Life since AD 550*, 2020.
- 1992 **B D Wilson** Winner, Food Book category, Fortnum & Mason Food Awards 2020, for *The Way We Eat Now*.
- 2000 **C Yau** Appointed Professor of Artificial Intelligence, University of Manchester, 2019.
- 1994 **Dr B M Zachariah** *After the Last Post*, 2019.
- 1984 **D Zeitlyn** *Mambila Divination: Framing Questions, Constructing Answers*, 2020.

Donations to the College Library

In the period from 24 September 2019 to 18 September 2020, the following members of the College gave the Library the books named, which they have written or edited or translated:

M Banner. *Everyday ethics: moral theology and the practices of ordinary life*; edited by Michael Lamb and Brian A. Williams. (Includes an essay: *Confessions of a moderately (un)repentant sinner* by Michael Banner.)

S Brook. *The wines of Austria.*

P Bull. *Monksgrange: portrait of an Irish house and family, 1769–1969.*

M Cashman. *Brexit's a trick not a treat?*

J Dummett. *Sicily: island of beauty and conflict. Reflections on its history and culture.*

T Dunkelgrün. *Bastards and believers: Jewish converts and conversion from the Bible to the present*; edited by Theodor Dunkelgrün and Paweł Maciejko.

C Fonseca. *Coronel Lágrimas.*

C Fonseca. *Natural history*; translated from the Spanish by Megan McDowell.

C Fonseca. *The literature of catastrophe: nature, disaster and revolution in Latin America.*

R Forder. *OR, defence and security*; edited by Roger A. Forder.

R Goyal. *Saving India from Indira: the untold story of emergency*; memoirs of J.P. Goyal; edited by Rama Goyal.

D Hodges. *Deep unto deep.*

J Lonsdale. *From divided pasts to cohesive futures: reflections on Africa*; edited by Hiroyuki Hino, Arnim Langer, John Lonsdale and Frances Stewart.

D McKitterick. *The Philobiblon Society: sociability & book collecting in mid-Victorian Britain.*

C Moore. *Margaret Thatcher: the authorized biography.* Volume 3.

D J Murray. *Interchange and other poems.*

D Nolland. *Meaning-centred psychotherapy: Viktor Frankl's logotherapy in theory and practice*; Elisabeth Lukas, Heidi Schönfeld; translated by David Nolland.

J Nott. *Memorable encounters.*

J Nott. *Trewinnard: a Cornish history*; introduction by Sir John Nott.

U Phadke. *The scale-up manual: handbook for innovators, entrepreneurs, teams and firms.*

M Pill. *Montgomery: friends within, foes without. Relationships in and around 21st army group.*

M Pill. *The 'rifleman': catastrophe at Cardiff docks.*

J Ramsden. *The box in the attic.*

F Robinson. *The Muslim world in modern South Asia: power, authority, knowledge.*

S Rogers. *Ancient & modern: hymns and songs for refreshing worship*; edited by Stephen Rogers [and five others]



Stephen Bond

R Roschnik. *Frontier fascination: adventures around the Swiss border on foot, by bicycle and kayak.*

G Roughton. *The house of Alice Roughton, Cambridge doctor, humanist, patron and activist: from the Edwardian to the contemporary;* Xavier Muñoz Puiggròs; translated from the Catalan by Julie Wark; with a postscript by Geoffrey Roughton.

E Segre. *In search of lost books;* Giorgio van Straten; translated from the Italian by Simon Carnell and Erica Segre.

E Segre. *The wild boy: a memoir;* Paolo Cognetti; translated by Erica Segre and Simon Carnell.

E Segre. *The eight mountains;* Paolo Cognetti, translated from the Italian by Simon Carnell and Erica Segre.

E Segre. *Seven brief lessons on physics;* Carlo Rovelli; translated by Simon Carnell and Erica Segre.

E Segre. *The order of time;* Carlo Rovelli; translated by Erica Segre and Simon Carnell.

E Segre. *Reality is not what it seems: the journey to quantum gravity;* Carlo Rovelli; translated by Simon Carnell and Erica Segre.

S Singha. *Future healthcare design.*

G Speake. *The life of prayer on Mount Athos;* edited by Douglas Dales and Graham Speake.

B Wardhaugh. *The book of wonders: the many lives of Euclid's Elements.*

R Whelan. *Shakespeare spelt ruin: the life of Frederick Balsir Chatterton, Drury Lane's last bankrupt.*

J H Williams. *Fundamentals of applied dynamics.*

J H Williams. *Wave propagation: an introduction to engineering analyses.*



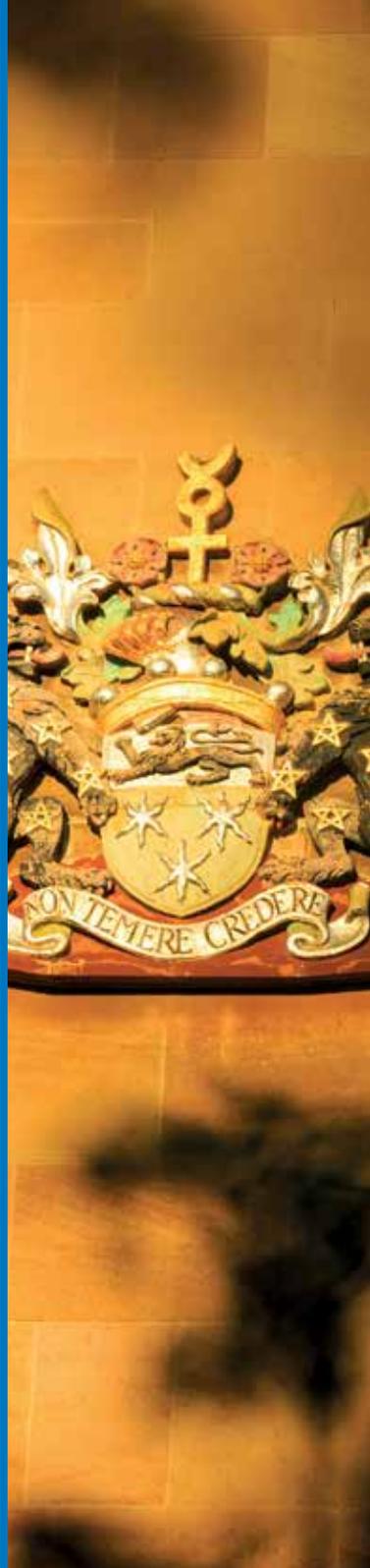
COLLEGE ACTIVITIES

FIRST & THIRD TRINITY BOAT CLUB

FIELD CLUBS

STUDENTS' UNION AND SOCIETIES

COLLEGE CHOIR





College Activities

Trinity College First & Third Boat Club

Joshua Hampson (2016)

First and Third is Trinity's historic Boat Club and one of the largest clubs on the Cam. Led by Captains Joshua Hampson and Juliette Wrixon and its devoted Committee, it has been a short and sweet season for rowing at First and Third this year. We started out in Michaelmas with a characteristically large and enthusiastic novice intake, many of whom graduated to become fully fledged seniors. The seeds of Lent successes were sown in Seville – a valuable week of training that was a highlight of the year for many. The year was set to climax in Easter, with boats poised to succeed at Bumps and M1 to have a crack at Henley, before the global pandemic caused a rethink. The Club adapted, and we kept our fitness going over Zoom and competed in Cambridge's first virtual May Bumps.

In Michaelmas this year we decided to drag everyone back a few days early from their holidays in order to ease them back into training and give our boatman, Bomber, a chance to see how people had progressed/regressed over the summer. We were in a strong position to compete, with two men's VIIIs and a women's IV selected by the end of Week 1. The women's side had a fairly clean state this year, with a number of members having graduated and Georgie Archer trialling for CUWBC. Promising times across the board at Autumn Head were backed up with division wins at Winter Head for M1 and the Women's IV. This litmus test for speed was confirmed with a historic win by M1 at the Fairbairn's, the culmination of the term's racing – a win which was the first by a Cambridge College in six years, and the first time back at the top for First and Third in eleven years. M2 and the women's IV also finished strongly – a shout-out goes to First and Third vet Neil Ibata for standing in at the last minute to row the 5k course for M2.



Fairbairns M1 winners.

First and Third's successes this year were due in no small part to the recruitment and training of novices, from undergraduate Freshers to established graduates. Having introduced over 100 people to our sport in October, we recruited six boats of novices to the Club. These boats were the definition of strength in depth: NM1, NW1, NM2 all achieved runner-up positions in races, with NM3 finally tasting victory at the Novice Fairbairn Cup as the quickest NM3, faster than most NM1s. Aside from racing successes, our novice programme allowed us to accommodate dozens into our community, which many of us appreciate as a home away from home. A Lent novice programme allowed us to plug gaps in the lowest boats and push for another big fleet. This, combined with our intake in Michaelmas, meant our selection was very competitive, leading to great success at every level.

Whilst most were still recovering from bringing in the New Year, twenty-six First and Third rowers made their way from all corners of the world to Seville for a week's worth of intense training. The training setup in Seville was world class, in terms of boats, river, and coaching. Having two men's VIII's and one women's VIII allowed for near-constant utilisation of the equipment and our two Coaches, Bomber and Neil Talbott (alumnus, 1999), to whom we are eternally grateful. The daily routine quickly became one long row in the morning as the sun rose,

followed by a technical paddle in the afternoon, interspersed with a three-course lunch (without wine) at our hotel.

The weather was quite unlike anything seen in the UK, with daily highs of about 18–20°C and full sun from sunrise to sunset. The objectively very wide and straight Guadalquivir river allowed for long and genuinely enjoyable sessions (though our coxes might disagree). The Club's members came closer together on this trip, from the evening games, our shared endurance of the hotel's bizarre (and sometimes dangerous) menu choices, or from sharing strategies to deal with an ever-growing number of blisters and callouses. We also managed to fit in afternoons of sightseeing and evenings out in Seville, despite our hotel seemingly being chosen so as to be as far away from any drinking establishment as possible whilst still being technically within the Seville environs.

My personal highlight on the rowing front was the “battle paddling” sessions between two matched eights, each a mixture of novices and seniors, where each eight, spurred on by a coach giving an emotional verbal diatribe, would attempt to out-paddle the other. Our efforts attracted many tourist photos as we thrashed our way through downtown Seville, looking, I am sure, very professional. In all seriousness, however, with each person having up to twenty hours on the water over the week, it goes without saying that every rower made very significant progress over the course of this training camp, and this can be seen, if you look in the correct way, in our results at Lent Bumps.



First and Third training camp.



W1 Racing 2020.

After an early Lent selection week back in Cambridge we had five men's VIIIs and two women's VIIIs set to go. Murmurs of returners meant that, in Lent, M1 were tipped to go even faster – both Peter Robinson and Reggie Mitchell, former CUBC rowers, were convinced to come back to don the blue and gold. Our M3 and M4 showed out with high finishes at Newnham, even with Storm Ciara blowing. Pembroke regatta was cancelled due to Storm Dennis – a distant memory now. Unfortunately, our determined but relatively inexperienced M4 and W2 narrowly missed out on qualifying for Lent Bumps with large numbers of boats entering their respective divisions. The week saw mixed success with M1 continuing their upward trajectory going up three, narrowly missing out on blades. W1 showed great commitment to training, which helped create a vibrant community filled with fantastic friendships. This commitment in Lent was gearing up for a successful May Bumps campaign with several returners to make seats competitive, but Lent Bumps probably came too early, with the crew unfortunately earning spoons – hard-earned, though, so expect this crew to bounce back. Meanwhile, M2 reversed results of recent years bumping up two, including a thrilling sprint to catch Jesus M2 – much to the relief of coach-come-secret weapon James Edgeley, who was forced to step into the five seat despite not having seen the inside of a boat for eight months. M3 retained their headship, but many members were left waiting for their first bump.

Lent Bumps were seen as a stepping-stone onto Head of the River Race in London, which unfortunately was cancelled due to COVID-19 – a temporary blip no doubt? Unfortunately, the devastating news broke that we would not be returning for Easter Term and all sporting events for the foreseeable future would be cancelled. One of the last group of events to happen before the lockdown was First and Third's Second Trinity Sculls, Talbott Cup and John Grenfell-Shaw Trophy. Despite threatening winds, all went ahead without a hitch thanks to the organisation of race secretary Bethany Ladd. At prizegiving, Mark Grenfell-Shaw, John's father, who ran up and down the river throughout the regatta, emphasised the importance of seizing the moment and having a just-do-it mentality – a message that is even more pertinent now we found ourselves sitting indoors having missed out on the opportunity for many Trinity farewells.

Despite the lockdown, the Boat Club community remained strong. We set up a Club account on Strava for people to share their fitness activities and keep the competitive spirit alive. We also introduced a programme of Zoom circuits sessions: each week one was run by Trinity's own Harry Veysey and the other was a joint session with the Field Club run by London-based, South African instructor extraordinaire Carl van Heerden – we are incredibly grateful to both of them. The Boat Club also ran its first online AGM and subsequently its first online elections via Zoom – streamlining both processes massively, a welcome change for many. The culmination of the term's video workouts came in Virtual May Bumps, which saw us rowers try to run 800m every day for four days. The organiser's algorithm informed us that as a club we went up six places over the week – hill-assisted or not... It was particularly pleasing to see the participation of two alumni VIIIs organised principally by Peter Ford.

Whilst I am incredibly sad about the truncation of this year and missing out on the chance to compete at Henley, I hope that those lucky enough to be returning next year will use the open ends to spur them on – may M4 and W2 avenge their Bumps snubbery, may M3 go out and get their first bump, may W1 start to undo their spoons, and may M1 get to Henley!

This year collectively we have nurtured at the Club a fantastic atmosphere of supportive competition through tough training and a great social calendar of pub trips, games nights, and our famous, or notorious, Boat Club dinners. I cannot wait to see how this cohort fairs next year and adapts to the challenges they face – they have all the tools to go on and be successful and are in very safe hands with Bomber and the new Committee. The best of luck to all!

Field Clubs

Trinity College Badminton Club

Charlene Tang (2016) & Warren Li (2016)

Trinity Badminton Club has enjoyed another productive and successful year in 2019–20. Several first-year undergraduates and new Postdoctoral Fellows joined us this year, strengthening our two women's teams and three men's teams. Highlights include winning the Women's League Division 1 in Michaelmas Term and winning Mixed Cuppers in Lent Term for the second year running!

On the women's side, we moved from strength to strength. We were delighted to welcome several new players to our W2, led by Connie Bambridge-Sutton and Vasu Prasad, and to see them grow from complete beginners to competitive players! Our Co-President, Charlene Tang, and W1 Captain, Chloe Caron, were invited



(Left to Right) Back right:
Chloe Caron, Warren Li
Front right: Tia Tian,
Matthew Hassall.

(Left to Right) Back:
Kevin Sohn, Sylv Ma,
James Xu, Helen Wan,
Claire Zhang, Matthew Sirman
Front: Charlene Tang.

from the University development squad to the main squad, joining Sylv Ma and Claire Zhang, seasoned veterans from winning Varsity last year. Fueled by several near-successes last year, W1 achieved an unbeaten season in the Michaelmas College League and shifted focus towards Cuppers and Varsity in Lent Term.

On the men's side, we enjoyed several successes throughout the year in the College League. M1 initially struggled with the graduation of several university-level players and unfortunately timed injuries. A relegation from Division 1 in Michaelmas meant a fresh start, with Edrick Ho leading M1 to a third-place finish in Division 2 in Lent Term. Led by Daniel Beech and our Co-President, Warren Li, M2 finally achieved promotion from Division 3 in Lent Term with a near-unbeaten season featuring several clutch performances, joining M1 in Division 2. Led by Alex Chamberlain, M3 showed great resilience by bouncing back from a relegation from Division 5 in Michaelmas and winning Division 6 in Lent.

More players fought in this year's Cuppers campaign than in recent history, with the club showcasing its strengths by submitting five teams in total: two mixed and two men's teams as well as a women's team. The men's team were knocked out by eventual runners-up Queens' in the quarter finals. The women's side made it one step further but were ultimately knocked out by runners-up Christ's in the semifinals. This made for an intense day out at the University Sports Centre, culminating in Trinity 1 smashing Jesus 1 at the Mixed Cuppers Finals!

Altogether, all teams have showed remarkable improvement as a result of weekly professional coaching from Jack Curtis and strength & conditioning classes from Harry Vesey, both graciously sponsored by the Field Club. Field Club colours were awarded to Chloe Caron and Tia Tian on the women's side, Daniel Beech and Matthew Sirman on the men's side, all for their dedication and phenomenal performance throughout the year.

Trinity Climbing

Alice Kirk (2016)

2019–20 has been a wonderful year for Trinity Climbing, with the biggest recruitment push the Club has seen in a long time: around a third of Freshers signed up to the mailing list at the Chaplain's Squash in October! This year, co-captains Alice Kirk and Angus Robinson wanted to focus on encouraging as many

people as possible to give climbing a go, and with 27 climbers attending the first Club session – around three times more than in previous years – this goal was certainly achieved. Trinity put in a strong performance in Cuppers over the year, placing third in Michaelmas, sixth in Lent and third in Easter. Unfortunately, the disruption to the latter half of the year has meant that there have not been any climbing trips outside Cambridge, but Alice Kirk and Louis Christie were Trinity representatives on the Cambridge University Mountaineering Club trip to Turkey in December, where, despite some unfortunate weather, they enjoyed a week of outdoor climbing, achieving new personal bests and ruining the skin on their hands! A huge congratulations to those who took part in Cuppers, and to those who came along to any of our sessions – we have high hopes for an even bigger and better 2020–21!

Trinity Hockey

Christopher Bealey (2017)

The men's side has had one of its most successful years yet. Luckily for the team, despite the loss of Gareth Jones and Ollie Dixon at the end of last year, a core of faithful and talented players remained available, so the 'Titz' were keen to build on previous success, including reaching last year's Cuppers' final. We were very happy to have some keen Freshers join the ranks to supplement the squad from last year, including Tristan Spreng, who will be captain next year. We also faced the odd prospect of having three goalkeepers (all female!) available for selection at the start of the year, which has never happened before and I'm not sure ever will again!

Having retained our position in the top league from last year, the men managed to battle their way through to top the league by Christmas remaining unbeaten (five wins and one draw) with a hard fought battle against Emma and a memorable 10–0 annihilation of Selwyn-Tit Hall. This qualified Trinity-Fitz for the Supercuppers Final for the first time in a long time – to which I will return.

The second term hailed Cuppers and the introduction of a mixed league to combat the poor attendance in the women's league. The mixed league was enthusiastically received by all, and it was enjoyable to combine teams and play alongside the women's team – although technically our goalkeeper Grace Montague-Fuller has made our men's team mixed for the last two years. After strong performances all



Hockey Team 2019–2020.

round, and a frustratingly narrow loss to St John's (who are still the worst team to play against in the league), we finished second in Mixed Division 1, with successes that we can look to build on next year. I hope that the mixed league continues into the future because it was great to have the men's team strengthened by some very capable women players.

As for Cuppers, the 'Titz' reached the semi-finals in the men's tournament without playing a game – courtesy of a pass in the first round from being finalists last year and a forfeit from Caius. Likewise, with a pass in the mixed tournament, we faced Robinson in hammering wind and driving rain in a ridiculously cold but well played 3–1 win to progress to the semifinals. Unfortunately, in the mixed semifinals we faced Jesus, last year's winners, whose team consisted almost solely of Blues players. We played extremely well, with great performances all round, but sadly we narrowly lost 3–2, denying us a place in the final. As for the men's semifinal, we faced up to Catz, who have a strong hockey heritage and a vast number of Cuppers wins. In one of our best performances of the year, we convincingly swept them aside with each man getting the better of his opponent.

A special mention must be made here for our short corner defence. Four Catz short corners in a row were repelled by my own valiant running and blocking, and some great reactions on the line by Joe Uprichard. Unfortunately, we were unable to win the final (as I am confident we would have done) because of the COVID-19 pandemic, which caused the cancellation of the entire summer term and Finals weekend along with it.

Finally, Supercuppers, which crowned the year's achievements. We faced off against Balliol/University College at Southgate before the beginning of the Varsity match. I do not know what the standard of the Oxford College leagues is normally like, but St Anne's/Balliol offered minimal resistance as we fielded a strong mixed side (as shown in photo) who we soundly beat 9-1 with some brilliant goals from Alex Kendall, Joe Uprichard and others.

It has been a brilliant year for Titz hockey, which I hope will be just as successful in the hands of Tristan and Grace next year. I have thoroughly enjoyed my last two years at the helm and three years representing the College, and I hope that the team spirit I have managed to build up will remain with the team. I also wish the best of luck to those players who, like me, are also graduating and will sadly be unable to play for us anymore (although these are mostly Fitz players). As ever, up the Titz!

Trinity College Association Football Club

Will Honeyman (2016)

Trinity's men's football teams continue to attract a large number of players of all standards, with three teams playing regularly in the first, third and fifth (out of six) divisions. The first and second teams, in particular, had a number of new faces following a large graduating class from the previous year, giving the season a transitional feeling.

The season commenced with the 1st XI's now customary defeat on penalties to a strong Old Boys' team that bore more than a passing resemblance to the side that came second in Cambridge last year. No fewer than four goals from Zoli Molnár-Sáska brought the game to 5-5 after extra time, before the cool heads of the more experienced side won out in the penalty shoot-out, followed by a curry. The match provided a very encouraging benchmark for the season, but two injuries during



Men's 1st Football Club.

this game, as well as a number of injuries in the first couple of games of the season (including to both captains), made Michaelmas a challenging term. During a run of games against some of Cambridge's strongest teams, a number of new recruits and 2nd XI players stepped up capably, with Trinity suffering some tight and unfortunate defeats (as well as a couple of less tight defeats).

Lent Term brought with it a newly reinvigorated and much healthier squad and saw a number of excellent performances. After a 5–2 loss to Robinson featuring some interesting refereeing decisions, revenge was served cold the next week with a 6–5 win against the same opposition taking us to the plate semifinal. With a draw against Sidney Sussex and a win against Homerton, the 1st XI were poised to escape relegation when the season was dashed by the COVID-19 pandemic and with it our hopes. A similar fate was suffered by the 2nd XI, who were a win from safety when their fate was prematurely sealed. Fortunately, both the first and second teams were able to restore some pride with a double victory against Christ Church – including a penalty shoot-out redemption for the 1st XI. Meanwhile, the Bruces maintained their position in Division 5 with a campaign that included beating the Christ's and St Catharine's 2nd XIs.

Sadly, there was to be no follow-up to last year's hugely popular and undefeated tour to Portugal, but those of us who are graduating look forward to coming back for the next Old Boys' game and wish good luck to next year's captains Fedor Misyura and Jakob Bull.

Trinity College Women's Amateur Football Club

Mara Lawrenson (2018)

Trinity College Women's Amateur Football Club (TCW AFC) has had another fantastic year. Owing to over half of our players graduating last year, we had an important recruitment drive during Freshers' Week, particularly at the Chaplain's Squash. This drew some excellent new team members, including the incoming captain, Keziah Heasman. The attraction of TCW AFC for many is that we welcome both completely novice and experienced players and train together in a supportive environment to build skills, confidence and teamwork. As a result, we had an exceptionally strong team and won the majority of our matches to become runners up in League 1, and thus we will be staying in the top Division this coming year. Throughout both the Michaelmas and Lent terms, the girls turned up in all weather and gave their all on the pitch, and the fact we are staying



Front Row: Katarina Cimeša, Olivia Horne, Ruby Rogers. Back Row: Mikayla Knutson, Kez Heasman, Lara Jenkin, Mara Lawrenson, Catherine Allen.



Players from left to right: Top Row: Mikayla Knutson, Katherine Van Kirk, Lara Jenkin, Mara Lawrenson, Lora Naydenova. Front Row: Phoebe Seltzer, Farzana Haque, Kez Heasman, Mia Reeves, Catherine Allen.

up for next season is a testament to their effort and dedication. TCWAF C also made it to the semifinals of the Cup where, unfortunately, we had a tough 3–1 loss to Pembroke 1sts. Among TCWAF C’s great achievements this year, our away visit to Oxford produced a 3–0 win against Christ Church in the annual sporting exchange – a hard-earned (and very satisfying!) result that shows how much the team has progressed over the past season.

The end of this academic year has presented many challenges. The eagerly anticipated alumni match and our last game of the season both fell victim to the abrupt end of Lent Term, and sadly this left us unable to give players leaving this year a last chance to play together as a team. Unfortunately, our planned tour to Milan, which had included the opportunity for the team to play a friendly abroad, also did not materialise. However, not to be disheartened, we organised team calls and even a TCWAF C-style quiz in order to stay in touch, and to give a fitting send off to our graduating players.

The results this year are all down to the girls’ outstanding commitment to training and matches alongside busy work schedules, and I would like to thank them all for their contributions to TCWAF C over their time at Trinity. The enthusiasm and

attitude of each player have made the team the success it is and have helped to make my job this season so enjoyable. It has been a pleasure to captain this year, and I look forward to playing next year and continuing to contribute to what I am sure will be TCWAFAC's future successes.

Trinity College Mixed Netball Team

Sam Bealing (2018) & Marc Bonaventura (2017)

With some of the more experienced players graduating this year, it was great to see so many Freshers getting involved with the mixed netball team including incoming Co-Captains Roly Peel and Frank Davis. We quickly bonded as a team and became a force to be reckoned with in the league; and, despite some of the Freshers never having played before, they developed very quickly and made



TC Mixed Netball Team 2019-2020.

great contributions to the team. A mid-table finish in Michaelmas was more a reflection of the difficulty of getting a team together at the weekend than our teams netballing ability.

We had a great turnout at Christ Church, with over thirty people signing up to play. This meant we had to split into two teams playing both an A and B team match. Unfortunately, we lost the B team match, but this was quickly forgotten when our A team came through with a comfortable victory.

Sadly, there was no Cuppers this year, though this does mean Trinity has now retained the Mixed Cuppers trophy for three years running. We would like to thank everyone who has played this season, particularly the Freshers, who will ensure Trinity's mixed netball prowess lives on.

Trinity College Men's Rugby Union Football Club

James Hughes (2019)

This season Trinity College Rugby rose like a phoenix from the ashes of 2018–19. Having only played three games last season due to a struggle for player numbers and having lost remaining stalwarts such as Dickens, Camsell and Jones to graduation, 2019–20 threatened to be a case of the man inside shying away from the tackle screaming: 'your man!'. As keen to forget 2019–20 as England were to forget 2015, we sought to arrest the slide – no comparisons with the Eddie Jones revolution intended. Along with my Vice-Captain, Ben Clark, we spent our summer planning to right the wrongs of the previous year. Firstly, the greatest injustice was addressed – an absence of stash. We arranged some personal stash along with a full new set of match kit (with thanks to the Field Club and our kit provider Saxon). Furthermore, as is increasingly becoming the norm in college rugby, we merged with another college side facing similar issues – Christ's. The newly christened Trinity-Christ's RUFC has been a roaring success, and we have been able to play full season of college rugby as well as bringing back more of a social element, all of which has helped the lads develop a strong bond.

A concerted recruitment drive encouraged stronger engagement from Freshers and second years alike, and we had some cracking early runouts, including a 10–0 win over Magdalene. Following 2018–19, we were dropped unceremoniously to college rugby Division 4 and had lost some star alumni. Negotiating the merger,



The pristine team.

and with many new players bedding in (including some completely new to the beloved game), we did face some mid-season teething problems and some tough results over the season. Luckily, we see ourselves as the new Bristol, a project club with a long-term plan to rise through the divisions. Certainly, we grew into the season with many strong performances that did not go rewarded at the final whistle because we could not turn territory into points – perhaps our stringent training regimen consisting of a weekly game of touch may have left fitness somewhat lacking? Also, I would like to use this platform to put out an SOS out for a fly-half!?

Sadly, poor conditions saw our away-day against Christ Church Oxford dubiously cancelled this year (rumour has it they just didn't want it). However, I would like to leave you with the crowning glory of the 2019–20, some long-awaited Cuppers silverware. Unfortunately, despite our resident Blue Joe Story finally being eligible, the college rugby gods, aka CURUFC's own John Naylor, did not favour us. In Cuppers we drew higher division sides Emmanuel and Churchill back-to-back, leaving us with what some might call an ignoble task of contesting the boot final against Catz. However, the opportunity for silverware and a desire to finish the season strong saw the lads relish the challenge. Playing at Grange Road, a strong social media campaign saw Trinity/Christ's fans flood the stands



Celebrating the Boot final!

for our final display of the season. Despite, and this is not an overstatement, the worst conditions ever seen in a college rugby match, on a pitch that would have given our own groundsman nightmares, we were adamant: let the boys play, and the TCRUFC triumphed as Boot champions with a 22–0 shut-out. Our forward pack was dominant, despite the pitch transforming rucking into competitive mudwrestling. Notably, incoming captain Owain Cooke powered over for a barnstorming score. Surprisingly, the backs even risked their manicured nails, showing some rare glimpses of ‘flair’. Including one glorious chip-and-chase try, ultimately scored by Christ’s Liam Baines in an effort worthy of Sean O’Brian (2017 Lions Tour first test).

Next season we push on, hoping for more consistency and eyeing a charge towards Division 3. With few lads departing and the merger continuing, it is a more optimistic time for Trinity rugby. All the lads deserve a mention for their performances and heart this season. Aside from those already referenced, I would

also like to praise George O'Dell and Franck Davis, two talented and committed Freshers who always left everything out on the field on a Saturday afternoon, despite usually having already left so much on the dance floor the night before. Also, second year Adam Fereday, who grew over the course of the season into an indispensable and bruising member of the now infamous TCRUFC pack. We will also miss tenacious utility player Tom McGachie, who is heading off on his year abroad. On a final note, I would especially like to thank outgoing fourth year and former captain Hilary Foord, who has done so much for College rugby over the years and could still be found coaching on the touchline this season, even when injuries and other commitments hampered his season.

Trinity College Tennis Club

Matt Hassall (2014)

Trinity College Tennis Club (TCTC) has enjoyed its most successful season in the memory of any current member of the Club, though the cancellation of Cuppers leaves us waiting a further year for any major silverware. Courtesy of generous



TCTC's victorious second and third pairs after their men's Cuppers quarter-final against Catz 1. L to R: Ben Barker (no.5), Hao Huang (no.3), Matt Hassall (no.4), Joe Turrini (no.6).

Field Club funding, TCTC enlisted some long-overdue professional help. Richard Bragg joined us once a week from Cambridge LTC to provide expert tuition in tactics and matchplay, and the most dedicated among us teamed up with Trinity Badminton to join Harry Veysey's in-house strength & conditioning sessions. Backed by this new coaching team and by an excellent summer of recruitment (with thanks to the Admissions staff for selecting such an array of new tennis talent!), TCTC served up some unexpected results.

For the very first time, we were able to field three teams in the open college league. Trinity 3 made a mark in their debut season, blending the experience of old hands such as Keshav Manju with newcomers such as Shreyas Pai, playing competitive tennis for the first time, to finish second in Division 6. Their highlight was coming from 0-3 down to draw 3-3 with the unbeaten champions Caius 2. Trinity 2, led from the top of the order by Elijah Mak and his ceaseless enthusiasm for playing tennis, romped unbeaten to the Division 4 title and a well-deserved promotion. Trinity 1, now into their third season back in Division 1 after a long stint in the lower leagues, traditionally only harbours ambitions of avoiding relegation. This year, we almost pulled off a shock title, Leicester City-style. We beat Catz 5-1, a strong Pembroke 5-1, and pre-season



TCTC being gently reproached by our coach for approaching the net too slowly. L to R: Dohun Chris Lee (3rds), Yo-ran Yang (1sts), Pascal Reeck (3rds), Matt Hassall (Captain), Warach Veeranonchai (1sts), Joe Turrini (1sts), Richard Bragg (coach).

favourites Jesus 6–0, slipped to a narrow 2–4 away defeat to Downing, and drew 3–3 with eventual winners Emma. Over the six years since this captain made his debut for TCTC, we had never previously taken a set off Emma! In the end, Emma recorded three wins and two draws to pip us to the title by a point, but our surprise second place bodes well for next year’s competition.

In the Lent term, we produced our routine annual victory over Christ Church, Oxford, thanks to Shreyas’ player-of-the-match performance, and Cuppers began. We combined with Emmanuel to field our first women’s team since 2014. “Tremma” made a thrilling start to their debut season, falling 0–3 behind to Downing W1 before first pair Kim Barker and Dasha Savanovich heroically won their three rubbers without losing a game to salvage a 3–3 draw. This was as far as the round-robin progressed before a global pandemic intervened; but on this evidence, Tremma’s chances of success were strong thanks to the commitment of Dasha, Andrea Sendula, and Ulla Meeri Petti from Trinity and Co-Captain Kim, Hannah Back, and Alexandra Tsalidis from Emma.

In men’s Cuppers, we entered two teams. Trinity 2 were handed a difficult first-round draw against Queens’ 1 and almost pulled off an upset, losing 4–5 with strong showings in particular from Balazs Bukva, former captain Alex Wettig, and the ever-cheerful Callum Weinstein, who won a three-set epic 5–7 6–4 10–8. Trinity 1 were seeded fourth and received a bye to the last 16, where we beat a very strong Fitz 1 team 5–4 thanks to the crucial efforts of third pair Ben Barker and Yo-ran Yang in gale-force winds. In the quarter finals, we beat Catz 1 without dropping a set as the team of Warach Veeranonchai, Rob Paraoan, Hao Huang, Matt Hassall, Ben Barker, and Joe Turrini played with skill, sportsmanship, and good humour – perhaps too much good humour, in Ben’s case.

We were looking ahead to our semifinal against Jesus 1, optimistic of a first Cuppers title in a decade, when the pandemic forced the cancellation of the competition, as well as our annual Summer fixture with the London Bar Lawn Tennis Society. Nonetheless, it has been a remarkably enjoyable year for TCTC, on both the social and competitive sides, and it has been an honour to captain the Club for a second time. In lieu of any on-court summer activity, the Club has voted on several awards. Our top seed, Warach, rightfully won player of the season, while the captaincy will be shared by Rob, voted one-half of TCTC’s best doubles pair, and Hao, voted TCTC’s worst grunter. It promises to be another interesting and successful season!

Trinity College Students' Union and Societies

Trinity College Students' Union

Ben Clark (2018)

Back in January when the new TCSU Committee members were writing their manifestos with ideas for what they hoped to accomplish in the coming year, none of us had a clue that in a few months' time we would be in lockdown. We had no idea that our goals and plans to help improve Trinity as a place of study and as a home would have to be put on hold, and that as a student body we would find ourselves entering Easter Term virtually.

So, how has the Committee adapted to lockdown, and what are our plans for the future? Apart from maintaining our academic studies, TCSU has focused on creating and implementing a weekly schedule of events online, mostly conducted through our Instagram account @trincollsu (please follow us). On Mondays BME Officer Serena runs 'BME Motivation Monday' in which she portrays an inspiring BME person and shows that success is attainable no matter the circumstances. Tuesdays are for takeovers: every week since the lockdown began a Committee member has invited Trinity students to share a day in their lives on our Instagram story and answered a variety of questions. For 'Welfare Wednesdays' Welfare Officers Vanessa and Roly have organised a term of weekly events such as virtual welfare teas and movie nights. The best Welfare Wednesday event so far has got to be the virtual bake-off last week, in which students sent in photos of their bakes, with the host – and creator of the very successful 'Cambrovision' – Tom McGachie picking a winner. It was great to see such a large number of students participating.

We have also been keeping in contact with students by email: for example, Access Officer Elizabeth sent out detailed information about the help available to Trinity students during this period, and Green Officer Ana emailed about Earth Day, reminding students of climate change issues even if other news commands the headlines currently. Computing Officer Simon compiles a weekly Sunday newsletter of announcements, Society updates and our recommendations for lockdown activities like workout routines, TV shows, movies and books.

Meanwhile the Committee has been hard at work organising Freshers' Week and contingency planning in case Michaelmas Term turns out a bit different to usual. We are in regular contact with the Tutorial Office, the Master and College staff to



Taken in the Master's Lodge. From left to right Simon Warrener (TCSU Computing Officer), Santiago Marin-Martinez (TCSU Overseas Welfare Officer), Beatrice Codd (TCSU Junior Steward), Vanessa Tang (TCSU Welfare Officer), Ludvig Brekke (TCSU President), Roly Peel (TCSU Welfare Officer), Ben Clark (TCSU Vice-President, Isabella Lynn (TCSU Women's Officer), Jeevan Shemar (TCSU Ents Officer), on bench from left to right, Serena Cole (TCSU BME Officer), Maelle-Marie Troadec (TCSU Treasurer), Ashna Ahmad (TCSU Mental Health and Disabilities Officer), Ana Dolinar (TCSU Environmental and Domestic Officer), Ishbel Russell (TCSU LGBT+ Officer), on the floor, Elizabeth Beevers (TCSU Access Officer).

ensure that we are cooperating as best we can to keep our community together and motivated through this challenging period. Clearly, the current TCSU Committee has had to assume a role quite different from that of our predecessors. We have slowly come to the realisation that ours is not likely to be a legacy of 'lights down the Avenue' or 'gym renovations being approved'. Rather, it is likely that we will go down as 'that Committee that was in place when coronavirus struck'. While it has been a challenge to move our focus away from improving College life and infrastructure, it is in many ways a privilege to take responsibility instead for keeping the student body entertained, motivated and inspired during these difficult times.

It has been incredibly rewarding to see our College community thrive in spite of the strains imposed by the pandemic, to see Trinity students participate in virtual events, reach out to those struggling, and engage with one another, both

academically and socially, even though most of us are removed from the College physically. Looking ahead, the TCSU Committee will continue to offer support and opportunities for our community to connect through fun virtual events until we return to Trinity. We will doubtless be remembered as ‘the Committee in place during coronavirus’, but if we are also known for our efforts to support and entertain the Trinity community during this period, we will be very proud.

Trinity College BA Society

Lukas Gast (2017)

The BA Society represents the graduate students at Trinity College and has more than 350 full members (Masters, PhD and clinical medical students) and 100 associate members (fourth-year students). The 2019–20 academic year has been another eventful one for the Society. Over its course, the BA Committee has organised in addition to Freshers’ Week more than 100 physical events in and around College, has participated in more than 20 College staff-student meetings, and has represented students’ interests through various channels. The events organised ranged from social events (formal dinners, brunches, and sports events) to cultural events (museum, theatre and concert visits), as well as academic events (BA seminars and other talks). This brief summary report gives an overview of the activities over the past year. We are thankful for the support from the College, especially the Tutors and Tutorial Secretaries, the Fellows, the Catering Department, the Accommodation Office and other members of staff.

The new BA Committee started its work in May 2019 with planning the events for Summer Term and Freshers’ Week. The major event in summer was the BA Garden Party, which provided a wonderful opportunity for graduate students to meet each other at the end of the academic year and a farewell opportunity for graduating students. The College’s decision to leave the USS and the implications for graduate supervisors were intensively discussed amongst graduate students and an open forum with various stakeholders was held. Other events in summer Term included visits to the Shakespeare festival and formal dinner swaps.

Freshers’ Week actually lasted ten days, with a full programme of 27 events for incoming Trinity graduate students. As in previous years, the events included a High Tea Party, a Fellows’ Panel, an international food night and several other cultural, sporting and social events. During Michaelmas Term, various regular



Freshers' Week 2019: Garden Party for Incoming BAs and College Families.



Freshers' Week 2019: Wine and Cheese Reception in the Marquee.

and special events were organised. Participation in weekly park runs kept the BAs active, while the weekly BA bar nights and formal dinners opened up space for conversation. Fortnightly brunches in the BA rooms, welfare hours and Women's Breakfast Mondays added to the variety of events that took place. As in previous terms, members of the BA seminar presented their research at BA Lunchtime seminars enabling many opportunities for academic exchange and discussion across disciplines. We were delighted to see our new Master and Fellows attending the seminars and enriching the discussions. Additionally, the events organised with the TCSU ("Ask a Grad" session) and Postdoctoral Society (joint bar nights and formal dinners) further added to an insightful and helpful exchange across the College's societies.

In Lent Term, we continued with the sports events, BA brunches, board game nights, book club events, as well as musical and theatre visits. An Afrobeat party with ASCU, formal swaps with other Colleges and meetings of the Postdoc Society were enjoyed by all members of the BA community. We are grateful that Dr Nicolas Bell gave us inspirational tours through the Wren Library's collections. Master, Dame Sally Davies gave a talk and attended a discussion with BA students on the



Lent Term: Event with Eleanor Catton organised by the BA Society and Trinity Forum.



BA Outdoor: Zorb Ball.

31 January 2020, and the Booker-prize winning author Eleanor Catton presented her work in an event jointly organised with the Trinity Forum. We are proud that the College raised the LGBTQ+ flag in February following a joint proposal by TCSU and the BA Society. The Committee also intensively planned new event formats for academic and social exchange, including a daytrip to Oxford and a multi-day hiking trip to the Peak district.

The Corona pandemic and lockdown halted many plans for events from March onwards. The BA Committee made a concerted effort to support BAs in adapting to the new circumstances. We created new online platforms for exchange amongst BAs, including virtual bar nights and board game nights, as well as virtual food tasting events. Additionally, we communicated with students across various channels and helped to coordinate between College and students if needed. The virtual staff-student meetings helped a lot to coordinate crisis-response and contingency planning. However, it proved difficult to maintain the same level of exchange among BA students given the new global distribution of “home offices” and the unavailability of venues for physical meetings. For the first time in the BA Society’s history, the AGM and the Committee elections as well as the handover took place virtually. Fortunately, several Committee members stayed on the Committee and all members helped to ensure a successful handover of knowledge and best practice.

The academic year 2020–21 will be a remarkable year with events that will have major long-term implications, including Brexit and the ongoing Corona pandemic. For the near future, the events previously most appreciated by BAs – including formal dinners, brunches and seminars – will not take place as they used to. However, I am optimistic that the new BA Committee and the College will work intensively and do their best to ensure that graduate students can enjoy an inspiring atmosphere for research and the exchange of ideas across the student community. Finally, I would like to say thanks to all the Committee members, who ran the BA Society’s activities in 2019–20, and once again to the Fellows and staff of the College for their continuous support of our activities.

Trinity Mathematical Society

Misha Schmalian (2018)

The Trinity Mathematical Society has been around for just over a century, and for the majority of this time we have adhered to the same goal: to supply the curious with maths and do this in an enjoyable way. In other words, with a glass of port in hand (or juice for the healthier and harder working among us) we sit down on Monday evenings and listen to the talk of an esteemed speaker from the mathematical milieu. One might expect slowly to focus less on the dimly lit blackboard and more on the Ruby in one’s glass. However, we are kept on our toes by our speakers, who are some of the most visible researchers in mathematics. Last year we were lucky enough to hear Dr Tom Crawford discussing the spread of water from rivers to oceans. Also, if studying the climate was too concrete and you were looking for the abstract, Professor Imre Leader illustrated to us how thinking in our standard two or three dimensions is utterly detrimental to understanding what happens in, say, 1000-dimensional worlds. Alternatively, if you wanted some insight into the future of mathematics, Professor Caucher Birkar shared with us laymen some of the central ideas and questions of algebraic geometry – a field in which he was recently awarded a Fields Medal.

With twelve events last year, we organized more than just the aforementioned talks. With the aim of hearing what new trends Cambridge’s PhD students are developing, we organized our annual symposium. Graduate students from all parts of the maths department gave short half-hour talks describing something fun they came across in their work. We got contributions from quantum hydrodynamics and

Ramsey theory to Diophantine equations in the Standard Model. This symposium culminated in our annual dinner in the Old Kitchens. This is quite representative of our general approach – we will take the time for hard maths, but we also see the value in good food and sound company. Our traditional “Call my Bluff” competition, a mathematical game of inventing and guessing definitions, made its annual reappearance. However, weekly talks were, and continue to be, the heart of the Society. We have had great help from sponsors and the College to keep academic and social events very financially accessible. With this intention of openness in mind, we also try to be welcoming to maths enthusiasts from the entire University.

The pandemic left us without an in-person Easter Term, so a post-exam garden party had to be cancelled. Much more tragically, the restrictions leave us without our traditional talks and events. We have spent the summer thinking about formats that might make best use of the new online medium we have been pushed to use. We have every intention of keeping talks engaging and inviting – even though not having drinks will slow our recruitment efforts a bit. We truly hope to see all of you at our events, in person or online, bringing your ideas and energy into the room.

Trinity College Medical Society

William Foster (2017)

Following the traditional welcome events for new members, Trinity College Medical Society was delighted to host some distinguished speakers in Michaelmas Term, beginning with Professor Jim Kaufman of the Department of Pathology presenting on how his research on the immune system of chickens can offer insights into its evolution in humans. Dr Tai-Ping Fan, from the Department of Pharmacology, spoke about his investigations into the scientific basis of traditional medical therapies. Alongside these academic events, we were delighted to welcome some of our medical alumni back to College for an evening with the current students, where we discussed their career paths since they left Trinity. We also collaborated with the University Psychiatry Society and Cambridge Mental Health Film Club to host one part of the international medical film festival MedFest. The new Master, Professor Dame Sally Davies, very kindly agreed to host our Society for brunch in the Master’s Lodge, which was followed by engaging conversation between Dame Sally and the students.

At the start of Lent Term the Society hosted a First Aid Course over two weekends. Thirty students, half of whom were not medics, attended the course, which was kindly subsidised by the College. Dr Daniel Ting, of the Singapore National Eye Centre, gave a very well-attended talk about the future of Artificial Intelligence in healthcare, following which Dame Sally presented a talk on her time as Chief Medical Officer. Of course, towards the end of Lent Term, our planned activities were curtailed. Our highly anticipated dinner with our alumni association (Trinity Medical Association) was regrettably postponed, along with our final events of the year. Since then, our students have instead been keeping in touch with weekly virtual socials.

In the midst of the pandemic, our final year students graduated early and began their careers as doctors. We are immensely proud of them and wish them all the best for the future. Finally, I would like to thank the rest of the Committee for their support and ideas this year, along with Dr Richard Hayward, our Senior Treasurer. I look forward to seeing the Society move from strength to strength with Krysia Sadzikowska as President for the forthcoming year.

Trinity College Science Society

Ryan Kang (2018) & Wojciech Jankowski (2018)

The Trinity College Science Society (TCSS) is a society that organises talks from distinguished speakers as well as being a support for the NatScis at Trinity. We pride ourselves on being one of the most active science societies in the University, delivering weekly talks on diverse scientific topics that are open to everybody, and how we delivered!

In all, we held fifteen weekly talks, a tea event, a symposium to celebrate the International Year of the Periodic Table, and the annual symposium, which included another thirteen talks followed by the symposium dinner. We had a record of three Nobel laureate speakers, which is a record for us and, indeed, for any society at this university. The average attendance was 75 people per talk, with many regulars, and the total attendance for all our events was 1500, with the Winstanley being full on a couple of occasions.

It's hard to summarise a year with so many fantastic talks and events, but here are some of the highlights. Michaelmas started with the Freshers' mingle, the first

opportunity for the committee to welcome the new NatSci Freshers and others interested in the Society. The weekly talks began in style with Professor John Sutherland, who gave a tremendous talk on the chemical origins of life billions of years ago on this planet. In week four, we had Professor Mary Dalrymple speak on the endangered languages of Indonesia. This linguistics talk had a very different audience, with many humanities students coming for the first time. In week five, we had the first of our Nobel laureates – Professor Brian Josephson – talking on new areas of Physics, even delving in the supernatural and emphasising the need to be open-minded. The return of the mid-term break with the Tea Cream Scones Society (TCSS!) tea party was loved by all.

Lent Term built on our success, with the first talk from Dame Sally Davies on using evidence to influence public policy. This was unsurprisingly a hugely successful talk, with many standing at the sides to catch a glimpse of the new Master. In week four, Professor Richard Henderson, the 2017 Chemistry Nobel Laureate, presented the research on cryogenic electron microscopy for which he won his Nobel prize, which was again enormously popular. In week six, we had Lord Martin Rees, the Astronomer Royal, who gave us a brief overview of the



Just some (!) of the committee. From left to right: (Back row) Jiří, Sophie, Ruslan, Lord Rees, Ryan and Khalid; (Front Row) Wojciech, Mirka and Tobi.

history of space as well as of how the future of the universe may unfold. The last event of the term – and unbeknown to us at the time the last event of the year – was the 17th annual symposium with keynote speakers including Professor Didier Queloz, 2019 Physics Nobel Laureate, and Professor Grae Worster, the Vice-Master of Trinity.

One of our aims as co-presidents was to increase the diversity of speakers and topics. To this end, we invited speakers from a wide range of disciplines including Computer Science, Behavioural Science, Climate Science, Plant Sciences and even Linguistics. In Lent Term, for the first time in the Society's history, half the speakers were female. We also increased our collaborative efforts with other societies, both collegiate and University-wide. We held a "Science in Policy" event – a panel discussion on climate change – with the Trinity Political Society and the Trinity Ethical and Green Affairs Society. Speakers at this event included Baroness Brown of Cambridge, Deputy Chair of the Committee on Climate Change, and Dr Catherine Rhodes, Executive Director of the Centre for the Study of Existential Risk (CSER). Further afield, at the end of Michaelmas, we organised a two-day symposium with the Cambridge Chemistry Society to celebrate the International Year of the Periodic Table marking the 150th anniversary of its creation. This was a hugely successful event, with speakers including Professor Sir Martyn Poliakoff, Dr Peter Wothers, and Dr Andrew Szydlo. We held two formal swaps with other science societies: St John's Lamor Society and the Cambridge University Science Society.

Unfortunately, due to the closure of the University, we were unable to hold the annual garden party and the tour of the Wren Library with a special focus on Newton's original works, which we are keen to reschedule once restrictions are lifted.

After an incredibly successful year, we are excited to hand over the co-presidency to Mirka Novoveská and Jindra Jelínek, who we are confident will implement new ideas going forward and take the Society to greater heights despite the uncertainties caused by the pandemic.

College Choir

Paul Nicholson

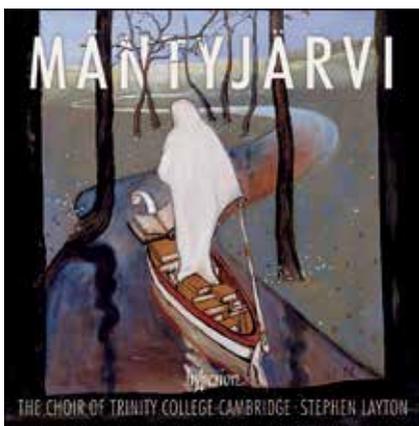
The “new” Choir for 2019–20 formed for the first time a little later than usual, as the “old” Choir had been on tour to the USA until the last week of September. The year also saw an unusually big turnover in the Choir as we welcomed eighteen new members, including two organists, but they quickly got up to speed and ready for the term.

In December, the Choir again performed Bach’s *Christmas Oratorio* with the Orchestra of the Age of Enlightenment as part of the Christmas Festival at St John’s Smith Square. The Choir was joined by an exceptional team of soloists, including Choir alumna, mezzo-soprano Helen Charlston (2011). In January, the Choir travelled to Berlin where they sang with the Sirventes Choir and their director, Stefan Schuck, in Kirche Am Hohenzollernplatz. They performed as part of a festival marking the 500th ‘Noonsong’ – a midday, German-language Evensong – the idea for which was first planted in 2006 when Stefan visited Richard Marlow in Cambridge and heard Evensong in Trinity Chapel. The service was broadcast live on YouTube and the Choir also performed a concert in the church as the centrepiece of the Festival.



The Choir rehearsing in Kirche Am Hohenzollernplatz, Berlin – January 2020.

The Choir's tour to the north of England, which was to take place in March and to include concerts at College Livings in Guiseley and Kendal, sadly had to be postponed due to the Covid pandemic. The aim of the trip was two-fold: to perform concerts to fundraise for Trinity Livings and to lead singing workshops in local schools (including near another Trinity Living in Barnard Castle). To prepare for this schools work, alumna Hannah King (2012) visited the College in March to give a workshop on leading fun and engaging singing training in schools. We very much hope to be able to put these skills into use soon and that our programme of schools outreach work will be possible again alongside the Choir's performances next year.



Artwork from the Choir's CD release of music by Jaakko Mäntyjärvi.

swing) and *How do you keep the music playing?* by Michel Legrand arr. Alexander L'Estrange, which have been widely and well received around the world. The Choir's recording of music by Finnish composer Jaakko Mäntyjärvi, completed in Chapel in January of this year, was released on 25 September 2020. The CD features a complete 'Trinity Service', commissioned from the composer, including responses, canticles and a psalm, as well as settings of the *Ave Maria* and *O Lux beata Trinitas*, all of which received their premiere at Evensong on 14 November 2019.

Full details of the Choir's CD releases, forthcoming performances, webcasts of services and YouTube videos can be found at www.trinitycollegechoir.com.

During the Easter term, with students away from Cambridge due to the pandemic, the Choir released weekly 'Virtual Evensongs' via YouTube. We are fortunate to have a wealth of archive recordings, which were used in these webcasts alongside readings from current members of the College community, recorded in their homes, and a 'Thought for the Day' from a guest speaker. The Choir also released two video productions, recorded in Chapel a few years ago, including Ben Parry's arrangement of Duke Ellington's *It don't mean a thing (if it ain't got that*



FEATURES

PANDEMICS ANCIENT AND MODERN

ME. US. THEM: WE MUST ALL BE SOCIAL
PHILOSOPHERS NOW

THE DIARY OF R.L. CUANY (1944)

SRINIVASA RAMANUJAN, THE PERSONAL
FRIEND OF EVERY INTEGER





Features

Pandemics Ancient and Modern Peter Sarris (2000)

The village of Barrington, in Cambridgeshire, presents the viewer with a quintessentially English rural scene: with its thatched cottages and village pub, and one of the best preserved and extensive village greens in the country, it could not feel further removed in space or time from the Mediterranean world in the 'Age of Justinian'. Yet this village and its environs have revealed startling evidence for the external crises that convulsed the Mediterranean world at



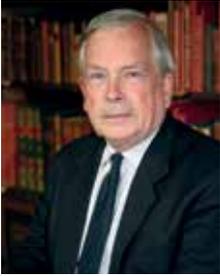
Emperor Justinian and his Court: Metropolitan Museum of Art.

the end of antiquity, and which clearly even reverberated as far afield as this picturesque corner of England. For near the village, at a site known as Edix Hill, archaeologists have excavated an early Anglo-Saxon burial site which would appear to go back to the middle years of the sixth century AD. Crucially, two years ago, study of the DNA preserved in the skeletal remains found there, revealed that two of those interred (comprising a mother and child buried arm-in-arm in the same grave), had died carrying bubonic plague, a plague which literary sources reveal had first arrived in the Mediterranean, via the Red Sea, in the year 541, and which clearly spread beyond the 'East Roman' (or 'Byzantine') empire of Justinian (r.527–65) with remarkable rapidity.

According to a number of contemporary eye-witness accounts (including one by the great Greek historian Procopius, who was present when the plague first arrived in Constantinople), within the Mediterranean world, the advent of the bubonic plague caused a *tsunami* of human misery, and posed major problems to the Emperor Justinian, who was at that point engaged in the re-conquest of Italy to the West, and warfare with Persia to the East. Within the imperial capital, Procopius describes over ten thousand victims a day succumbing to the disease (an estimate that is largely consistent with the sort of mortality rates associated with later but related bubonic outbreaks). Justinian was obliged to respond with emergency legislation trying to impose price and wage controls, making it easier for people to make wills, and trying to prop up the empire's 'banking sector'. The plague also served to intensify apocalyptic expectations on the part of many of the emperor's subjects, and led Justinian to crack down on pagans, heretics and others held responsible for the divine displeasure that had descended on his realm.

Importantly, a sudden loss of taxpayers and military manpower exacerbated the empire's existing fiscal and logistical problems, and would contribute to growing military and political instability in the late sixth century. The sixth-century plague sapped the empire's strength, thereby facilitating its seventh-century collapse, when it would lose control of Syria, Palestine, and Egypt initially to the Persians, and then to the Arabs, united by the nascent faith of Islam. The plague tended to advantage less hierarchical and less urbanized societies over their more hierarchical and urbanized imperial foes, which were more structurally vulnerable and thus prone to collapse. It also had the effect of breaking down and disrupting ties of commerce and exchange between regions. Up until the middle years of the sixth century, for example, Justinian's empire

had maintained commercial contact with communities in western Britain, seemingly exchanging imperial gold for tin. In the second half of the century, these connections appear to have broken down, facilitating Anglo-Saxon expansion as Romano-British resistance collapsed. What role such commercial ties played in the initial arrival of the plague in England is currently unclear, but the way in which the 'Justinianic Plague' served to fragment globalized networks of trade, and exacerbated and tested existing structural weaknesses within the most complex late antique societies, may resonate with our own experience today.



Me. Us. Them: We Must All Be Social Philosophers Now

Professor Philip Allott (1955)

Never in the whole of recorded human history has humanity had to face so starkly the fragility and the complexity of the social aspect of human existence. Wars and natural disasters have something of the same effect, but on a limited scale. Climate change has begun to teach us that our personal behaviour, and the behaviour of businesses and governments, can affect the future of the planet and the future of humanity.

The coronavirus crisis is exceptional. It has placed the challenges of human social existence at the centre of the lives of everyone, since its consequences in terms of life and death immediately affect each human being individually and all human beings everywhere and all human societies. We all now know that our response to the challenges of social existence involves a mass of compromises worked out from day to day whose practical effects can prove to be very good or very bad and everything in-between.

It is in the family that we first discover the conflict between independence and interdependence. We are expected to do what is expected of us. Families become cities. Cities become nations. Nations co-exist. All of them must resolve the conflict of the one and the many in order to survive and prosper.

It is also in the family that we first learn of the problem of our identity, the conflict between the self and the other – me and them. We form our idea of our self and our needs and desires in the company of other people with their own identities. Self-interest is in a permanent struggle with shared interest. And so it is with cities and nations and all intermediate forms of human society.

Brexit is a vivid instance of the struggle between the one and the many – independence and interdependence – does the EU increase or decrease what people call our ‘sovereignty’? – and also of the struggle between the self and the other – do British people see themselves also as Europeans? do Continental Europeans see us as Europeans? – us and them. Indeed, the EU itself is a massive set of compromises between nationalism and internationalism – national identity and European identity – national interest and common European interest.

Illoetheni, CC BY-SA 4.0 via Wikimedia Commons



People's Vote march, London, October 2019.

The eruption of Black Lives Matter during the coronavirus crisis has reminded us that the compromises of social existence are made in terms of shared values, including not only utilitarian values but also the very high values of justice and human dignity. In every society, from the most liberal democracy to the most autocratic dictatorship, interpretations of those values are ultimately enacted in the form of law.

Black Lives Matter has also reminded us that societies are systems of power, the expression of the human will, individual and collective. Power is unequally distributed, and the law, an application of power, may be the source of gross injustice and permanent violations of human dignity.

We know from human history that the struggle of identity can have terrible consequences when the idea of the other becomes a source of hatred, discrimination, persecution, violence, oppression, nationalism, war, and genocide. Human history is full of the evils caused by the transformation of Me and the Other into Us and Them.

The superficial response to these facts of human social existence is that they reflect human nature. That is how human beings have always been and always will be. This pessimistic view of human nature ignores the further fact that human beings have discovered how to create societies that allow millions, now billions, of people to have the possibility not only of surviving but also of flourishing. After millennia of oppression and exploitation, the mass of the people can now enjoy forms of life that had only been available to the most privileged members of society.

We fail to recognise this staggering achievement of the human mind and the human will. The idea of progress is ambiguous. Much that many people see as progress may be seen by many other people as symptoms of decadence. For example, the intense socialising of people in the twenty-first century, especially through the social media, may also be the insidious undoing of our powerfully creative individuality. But the possibility of human progress is now established as an integral part of human nature.

Like climate change, the coronavirus crisis is a challenge to humanity. The historian Arnold Toynbee surveyed the rise and fall of what he called 'civilisations', that is, exceptionally powerful social systems that had a distinct identity. He identified civilisations that survive as those that responded successfully to existential challenges.

As in the case of climate change, our response to the coronavirus crisis has been primarily dominated by governments. It has been subject to much criticism. Retrospect will say whether they could have done better. Governments cannot now escape the fact that there has been a great increase in the sophistication of the thinking of their citizens about the way in which they are governed. Everyone is now thinking about it and talking about it and shouting about it. Black Lives Matter is contributing significantly to this new consciousness. The citizens have also shown a sense of responsibility in doing, individually and collectively, what governments have failed to do effectively.

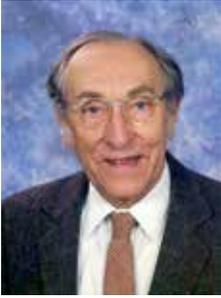
Historical turning-points can only be seen in hindsight. In the meantime, it is not unreasonable to think that some deep form of human progress may emerge from what we are now enduring. We may believe that humanity is capable of responding successfully even to existential challenges that have no precedent in human history.

R. L. CUANY,
TRINITY COLLEGE,
CAMBRIDGE.

VE

DIARY





The following is from a diary written by Robin Louis Cuany, who was an undergraduate at Trinity from 1944 to 1947, reading Natural Sciences as a scholar and specialising in Plant Sciences in Part II. Born in Glasgow on 17 October 1926, Robin was educated at Manchester Grammar School. After graduating, he worked for five years in agricultural research in the Sudan, where he met his first wife Carolyn; he and Carolyn were married in 1951 in her home town of Washington, Iowa. Robin completed a PhD in plant breeding and genetics in 1954-8 at Iowa State University, after which he worked as a geneticist in Costa Rica for three years. From 1962 until his retirement in 1992, he taught genetics, plant breeding and international agriculture, first at the University of Iowa then at Colorado State University. Robin and Carolyn (who passed away in 2004) had six children: Gwendolyn, Marianna, Janet, Louella, Heather and Gordon. Robin, who married his second wife Peggy in 2008, now lives in a nursing home in Knoxville, Tennessee.

Robin kept his 'VE diary' on small pieces of paper for three days, detailing his experiences on the day World War II ended (VE Minus 1 Day), and for the official VE-Day and VE-Plus One Day. The diary vividly portrays the chaos and euphoria of these times, interspersed with the mundanities of College life. It was recently rediscovered by his eldest daughter, Gwen Hines, who sent a scan and a transcript to the College. The edited text below is reproduced with Gwen's kind permission.

VE DIARY OF ROBIN CUANY (1944)

VE Minus 1 Day

On 7 May 1945 I overslept and was woken by Arnold at about 9:15 am. We then breakfasted off a loaf and a cup of tea. I went off to a Botany lecture and practical from 10 to 1. After lunch we were all excited and listened nearly every hour to the news. At 3 pm we heard that the Germans had announced their surrender from Flensburg, but the time of Winston Churchill's broadcast was not yet known.

Bob then called to see if we had heard the good news, and the three of us went down to the Post Office, to post a parcel, get some postal orders to send to the Youth Hostels we were going to stay at in the Long Vacation. I opened an

account in the P. O. Savings Bank, and as the book has to be sent up to Head Office every year, it will help to remind me of VE Day for years to come. On the way back Arnold and I bought a flag apiece at 2/6.¹ We busied ourselves until teatime by making two more flags by painting post bags with red and blue inks and hanging them out – the best along with the bought one over Sidney St, the other overlooking the court.

Tea was eaten in Arnold's rooms with Tom and Martin just after 4 pm, and we listened to the wireless until Hall time. After the usual prayer-meeting (Arnold, Gerald, Alan + myself) we turned the wireless on – about 7.40 pm – and heard the following announcement:

‘The Prime Minister – the Rt. Hon Winston S. Churchill C.H., O.M., will speak at 3 pm tomorrow, 8 May. The king will speak at 9 pm. Tomorrow is therefore Victory in Europe Day, and Wednesday 9 May is VE + 1 Day. Both days will be celebrated as national holidays.’

We then went round to Market Hill, the heart of Cambridge, but nothing unusual was happening. After listening to the 9 pm news at Bob's, we went back to Market Hill and found people gathering around the SW corner. Soon there was quite a large crowd, heckling would-be orators, cheering the explosions of thunderflashes, always brought out for ‘rag’ occasions, and cheering an American MP and several paratroopers. Undergraduates climbed the fountain in the centre of Market Hill, with slight damage, and tied flags to the spike at the top. A Swastika was burnt to the roar of “Sieg Heil” from many throats. A car which we were using as vantage point was made rather shabby by the efforts of an RCAF officer to cross the canvas roof. I then helped to try to move the car round and turn on the headlights to shine on the flag on top of the fountain. Some police quickly restored it to its former position.

By this time the crowd had grown considerably and had taken up the cry, “We want the Mayor”. He did not appear – but in the time-honoured rag fashion the paper salvage box by Great Saint Mary's was set alight, and lighter fuel was used to build up the fire, to which were fed broken-up market stalls. A policeman helping to take these off again lost his helmet and stood by looking rather forlorn. Soldiers, sailors and undergraduates climbed lampposts, and the crowd

¹ Two shillings and sixpence

VE DAYTRINITY COLLEGE.
CAMBRIDGE.Tues. 8th May 1945.

During to the late bedtime, I did not wake in time for breakfast, but as it was 'rotten breakfast' (porridge and toast only) it did not bother me very much. When I went out into the street to see if anything was happening, there were several fire-engines about, and there was a rumour of Matthew's coffee-roasting plant being on fire, but nothing seemed to be doing. Martin, Brian Powell and I got into the back of a fire engine, and after a few false starts, we were taken along at great speed to the fire station, where we quickly jumped off. We walked back rather more slowly, and met Arnold + Bob in the Market Hill.

Loudspeakers from Miller's were being fitted up on the balcony of the Guildhall, and floodlights on posts opposite, everywhere were flags and bunting, and on the front of the Guildhall, all the United Nations were represented, with America, Britain, China and Russia in the most prominent position; there was a V and a crown of colored

cheered frantically when somebody appeared by the big illuminated clock on the Guildhall, and turned the hands back from 11 pm to 9:30. About 11.45 (correct time), the crowd began to dwindle, and Arnold and I got back into college, drank cocoa and ate precious chocolate biscuits.

At 12.30 a.m., the “billiard table” was lit up by several small fires, burning newspapers were let down from the upstairs windows, also a burning roll of toilet paper. Then a biscuit tin filled with gas was lit and blew up. A small wood fire on the base of the statue of Hermes (stolen last October) was used to heat a sparklet bulb, which blew up with terrific violence. This brought several people from their rooms, and a proper fire was lit with bags and some coal, on the statue base. We used Arnold’s tin tray to fan the flames, and Baron produced a song-book, so all 25 of us sat round in camp-fire fashion, and sang to an orchestra consisting of an accordion, two flutes, piccolo, oboe and violin. Alan Davies took two photos of us, with one-minute exposures. When we had exhausted our repertoire of songs, we took to hymns and carols, finishing with ‘Auld Lang Syne’ and the King. The fire was finally blown up about 3 am with another sparklet bulb.

* * *

VE DAY

Tuesday 8 May 1945

Owing to the late bedtime, I did not wake in time for breakfast, but as it was “rotten breakfast” (porridge and toast only) it did not bother me very much. When I went out into the street to see if anything was happening, there were several fire-engines about, and there was a rumour of Matthew’s coffee-roasting plant being on fire, but nothing seemed to be doing. Martin, Brian Powell and I got into the back of a fire-engine, and after a few false starts, we were taken along at great speed to the fire station, where we quickly jumped off. We walked back rather more slowly and met Arnold + Bob in the Market Hill.

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Robin on graduation day, 1947.

spaces, and one of the most important ceremonies was the bonfire on Midsummer Common at 10 pm with dancing until 2 am.

We went for a walk on the Backs and leaned over Trinity Bridge for an hour watching the river traffic. We then decided to uphold our rights by flying bowls on the Scholars' bowling green in front of the Library. We played for half an hour, with Arnold and Bob winning against Tom and me. Alan + Martin watched – the slope of the green needed careful judgement of the right bias to use.

After lunch, Arnold and I went to Market Hill, where most of Cambridge had assembled. At least 50% of the women wore dresses with a dominant pattern of red white and blue, and many waved flags. Streamers were thrown all over the place, and many people were dancing in rings to music played over the loudspeakers. There were not many tunes, but they were played over and over again, and everybody was so happy that they didn't mind. I saw hardly any couples dancing, all the dancers joined hands and whirled round in rings, which broke under the strain, but soon joined again. Most of us joined in one or two Palais Glides, and there was a long chain doing the Conga.

Towards 3 pm everyone became hushed, and there was complete silence during Churchill's speech, and everyone stood to attention while the National Anthem was played. Arnold then invited Hubert Jones and me to tea, which we just had time to swallow by 4 pm. We missed the Mayor's speech but heard most of the simple service following. There were services almost hourly in Great Saint Mary's, and the church bells often drowned the loudspeaker. A girl of 11 recited from the Guildhall balcony – a poem entitled, "They've got you Mr. Hitler; they've been coming after you." After that the dancing started again, and a few danced right through a shower lasting about half an hour, though most people took shelter, and Hubert went back to his digs about 6 pm. I was so tired that I left Market Hill and went to Hall etc with streamers wound around my neck.

Dinner in Hall was a festive occasion. There was soup, roast beef, cabbage and roast potatoes followed by college pudding. Most important, there was a free glass of champagne, filled to the brim for everybody. After Hall, we held our usual prayer meeting and on returning to Arnold's room, found it full of people. A cart bearing

effigies of Hitler and his gang passed by along the street, and we all cheered it loudly, whereupon we had to give up our loose change for the Red Cross.

We then returned to Market Hill with Hubert and joined with a gang of his friends from Emma. Tom and Arnold wore squares which they had inherited from the previous occupants of their rooms. More dancing in rings took place, and once we had quite a large ring confined to Old Mancunians. Both the squares were lost, by being used for playing rugby, or by being thrown high over the heads of the crowd. At 9 pm the crowd stood in silence listening to the King's speech, and then sang "God Save the King" with great vigour. A band countermarched in front of the Guildhall, then we joined a crowd of people all making for Midsummer Common. Some undergraduates and women in front of us, led by Alan Davies, did a peculiar sort of marching, with frequent changes of step. Some even wore evening dress.

There was most of Cambridge – town and gown – gathered there in a huge throng, with a space in the centre for a bonfire of old boxes and in fact anything



On the steps of Senate House, having been admitted as Master of Arts, 1951.



Returning to Trinity in 2007.

that would burn – 30 ft across and over 10 ft high. Effigies of Hitler, Himmler, Goebbels, and Goering, not forgetting Ribbentrop, were piled on top, and the fact that the torchlight procession arriving from Market Hill found the bonfire already alight, in no way detracted from the excitement. Searchlights round the edges of the Common directed their beams in a cone above the bonfire, and there was a hum from their generators which could be heard above the noise of singing, shouting and gramophone music relayed by a loudspeaker at one corner.

Everyone roamed around, some in gangs, some in couples, and whole families parked themselves near the outside of the crowd. I lost Arnold near the beginning, and then Tom left me to go off to bed; later I found Arnold again, rather by luck than by searching. We then joined with a gang of Northerners, including Cross, Dickson, Gradwell and Hubert Jones. We tried dancing, but as no partners were forthcoming except drunken ones, we resumed our roamings. The fire had died down to a glowing mound of embers, and brave spirits darted across the space (about 30 ft wide) between the spectators and the embers.

About 11.30 pm. there was quite a noticeable lowering in numbers and in the character of those who remained, and as Arnold and I left Midsummer Common, a couple of women, obviously under the weather, asked us for our gowns as souvenirs. We walked slowly down Jesus Lane, got to Sidney St about midnight, but decided to go and have a look at Market Hill. This was however deserted, so we climbed into college through the grating at 12.30 pm. We took some food and pots up to Martin's where we had a feast of tinned salmon, meat paste, chocolate biscuits, orange squash and cake. We got to bed about 2.30 am.

* * *

VE + 1 Day

Wednesday 9 May 1945

I woke fairly early, in spite of the previous late nights, and had a shower before getting down to breakfast. I should also have done the laundry but neglected it as I thought it unlikely that the laundry would collect on VE +1. It turned out afterwards that they did collect, so my laundry arrangements went rather astray for the next two weeks. The first half of the morning was spent in getting a few clothes, a lot of sandwiches and some lemon squash ready, for Tom and I



Trinity members carrying out practice manoeuvres with the College fire engine, May 4 1941.

were going for a day's sailing (originally only an afternoon) with Arthur Adam. We left Cambridge about 11 am, getting to Waterbeach (the temporary home of the CU CrC,² on the Cam SC's³ premises) soon after 11.30. It was however 1 pm before we set off properly, as we had to come back for a baking tin to remove a certain quantity of water which seeped in through the centreboard case.

When we got started, we ran with the wind aft down to Bottisham Lock, rowed through it, hoisted the sails again and ran at a respectable pace about 7 miles down river till we came to the first bridge below Clayhythe – Dimmocks Cote. Here the wind got rather fresh, so we took in a reef, had our lunch, and then found when we tried to start back that there was not much wind to beat against and progress was slower and slower as far as Upware. After that we sailed when there was a breath of wind, but it deteriorated into a long row back, especially as the current is fairly strong in the lower reaches; so we did not get back to Waterbeach till 8 pm. After towing the sails and so on, we set off home on our bicycles, arriving at 9.20 pm.

Tom and I ate a hearty supper of more than a loaf between us and finished after 10 pm. He went to bed as he felt tired, but I conquered the latter sensation and climbed out of the grating to see what was happening in the way of celebrations.

Most of the day had been taken up by the Dagenham Girl Pipers, the Home Guard Brass Band, and a bugle band, countermarching and playing stirring tunes in front of Addenbrooke's Hospital. There was an exhibition of Highland dancing by the DGP on Christ's Pieces. In the evening and till 2 am there was dancing on Christ's Pieces, Parker's Piece and on Market Hill in front of the Victoria Cinema. In general, there was less of the carefree revelry of VE Day, probably because people were thinking about getting back to their jobs to help beat the Japanese in the Far East.

I went straight to Parker's Piece via Market Hill, and from 10.30 to 11.30, roamed around, occasionally meeting people I knew, but for the most part entirely on my own. The crowds were almost as huge as those on Midsummer Common the night before – the search lights were out in full strength again giving a display of weaving beams. Several aircraft dived low over the area, making a deafening

2 Cambridge University Cruising Club

3 Cambridge Sailing Club

row. Thunderflashes went off now and again, with shrieks and cheers as an accompaniment. There was Miller's loudspeaker system, playing through the records that most people knew so well.

About 11.30 pm I found Bob with Wendy + Trudy, having just come over from Christ's Pieces. I joined them in ring dancing, a Palais Glide and a Conga. About midnight we went off arm in arm with some other LSE friends to their digs at the back of Parker's Piece, where we were given a cup of tea. Bob + I made our way home through the streets with Wendy + Trudy, singing at the top of our voices. When we got to Whewell's Court, I saw my window lighted, and guessing that Arnold and Martin had probably been listening to the wireless, I shouted up to them. Martin and I agreed to go down to the river for a 1 am bathe. I showed Wendy + Trudy the grating – our way in "after hours," and bade them goodnight, and Bob and I climbed in by his window to join Arnold and Martin.

We got down to the river and undressed, but finding it too cold, decided not to risk double pneumonia but to dress again. We got back into Whewell's Court in Bob's window, Trinity St and the grating. After orange squash, Martin left us and Arnold and I finished the day with a short prayer meeting, getting to bed about 2.30 am.



Wearing his Trinity tie with pride, 2017.

'Our dad remembered his time at Cambridge with great fondness and always looked forward to receiving any Cambridge publications and devouring them. Going through his office after he became a patient in the nursing home four plus years ago, I ran across many of them with some hand-written notes on some. I also found among his things an old tie which I was about to toss when I wondered if he had kept it for a particular reason. He was having great memory problems, but nevertheless when I showed him the tie and asked about it, he immediately told me it was his Trinity tie, so of course I had him put it on. He even managed to tie it, and I took a photo.'

Gwendolyn Hines



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Srinivasa Ramanujan, The Personal Friend of Every Integer

Béla Bollobás (1963)

Introduction

Srinivasa Ramanujan, who died one hundred years ago, was an extraordinary mathematical genius, perhaps the most remarkable Fellow of Trinity ever. He was largely self-taught: he rose to amazing heights by teaching himself from one or two books. And, unlike Newton and Gauss, he was not only a mathematical genius, but also a kind-hearted, modest and very generous man. In this brief essay I shall say only a few words about his life, and even less about his mathematics, as I do not wish to be technical.

India

Ramanujan was born into a Brahmin family on 22 December 1887. In accordance with custom, his mother had gone to her parents in Erode, Tamil Nadu to give birth to her first child. After a few months, she returned with him to their home

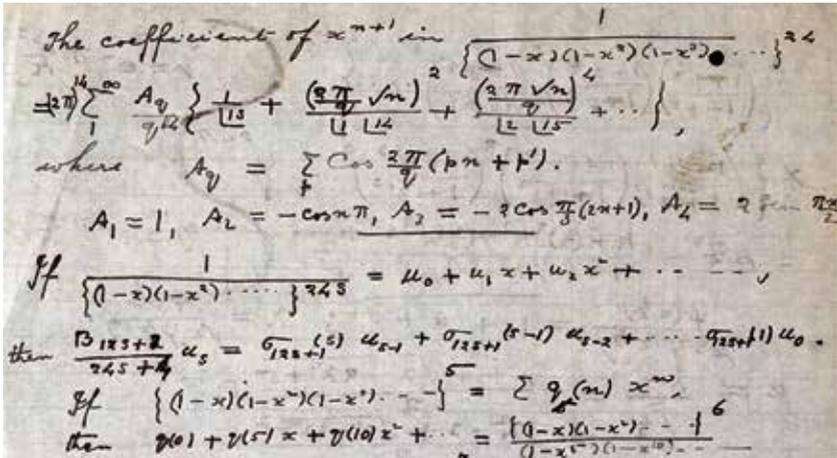


in Kumbakonam, about 140 miles east of Erode and 170 miles south of Madras. Ramanujan's father and grandfather were low-level accountants, *gumastas*, to local cloth merchants. His mother bore five more children, two of whom lived into adulthood.

Ramanujan, like some other brilliant scientists, started to speak late: in his case, when he was four years old. On the other hand, his mathematical ability manifested itself early, when he was not quite ten: he came first in his district's Primary Examination; this enabled him to pay half-fees in his school. In his teens, Ramanujan taught himself mathematics, relying mostly on two books. First, when he was twelve, he borrowed Loney's *Plane Trigonometry* from an older student and solved every problem in that book. S.L. Loney (1860–1939) was a good mathematician: he was 3rd Wrangler in 1882, then a Fellow of Sidney Sussex and later a professor at Royal Holloway College. Although his book was first published in 1893, it is still in print; in particular, in India it is required reading for aspiring scientists. While in the fifth form, Ramanujan discovered Euler's formulae for sine and cosine and was disappointed that he had been pipped in his discovery.

The second book, which he borrowed from the Government College library in 1903, awakened his mathematical genius, and greatly influenced the way he was to do mathematics. This was *A Synopsis of Elementary Results in Pure Mathematics* by George Shoebidge Carr (1837–1914), an unusual and very large book first published in 1880, made famous by its influence on Ramanujan. It contains over 4000 theorems, from easy observations to difficult theorems, with either no proof at all, or with only a brief indication of a possible proof. Carr intended his book to be an aid to students preparing for the Cambridge Mathematical Tripos, but for Ramanujan it opened up the wonderful world of mathematics. Even the style of the *Synopsis* rubbed off on Ramanujan: as paper was expensive, he worked on a slate and transferred his finished results into his treasured notebooks, without bothering with proofs.

He learned much mathematics from the *Synopsis*, which had a considerable amount on algebra, calculus and geometry, three fundamental areas of mathematics. However, this book had essentially nothing on the complex function theory that our undergraduates learn in their second year, or the theory of elliptic functions, to which Ramanujan was to make profound contributions. In fact, before he left India, Ramanujan had not even heard of Cauchy's theorem, a cornerstone of the theory of complex functions. The great importance of the *Synopsis* was that it lit the fire of Ramanujan's everlasting love of mathematics. When, later in his life,



Formulae from Ramanujan's first notebook.

Ramanujan studied elliptic functions, he did so without any use of the theory of complex functions, so it is likely that he also studied Alfred George Greenhill's book, *The Applications of Elliptic Functions*, with its old-fashioned presentation of elliptic functions. The subject is rich in infinite series and products close to Ramanujan's heart, and Ramanujan soon became a master of their formal manipulations. Also, as a fully-fledged mathematician, he was the undisputed champion of continued fraction expansions of analytic functions: he must have learned the basic theory of continued fractions from Carr's book.

On a personal note, I first heard of Ramanujan, along with Hardy and Littlewood, from the great peripatetic Hungarian mathematician Paul Erdős (1913–1986), whose student I was from my early days. Erdős regularly visited Cambridge from 1934 until his death over fifty years later, and he spent a term with us as a Visiting Fellow Commoner. When I was fifteen or sixteen, he told me that Ramanujan had the greatest 'natural' mathematical talent ever. By the unusual adjective 'natural' he meant talent without the influence of other mathematicians, the talent one is born with. Erdős, like most mathematicians, admired Ramanujan for rising to amazing heights in spite of all the disadvantages he had to face.

Erdős was also an admirer of the two great Cambridge mathematicians, Godfrey Harold Hardy (1877–1947) and John Edensor Littlewood (1885–1977). The Hardy–Littlewood partnership, which had started in 1910 and went on until the death of Hardy, was the greatest partnership mathematics has ever seen:

the two of them dominated mathematical life in Britain. Erdős also remembered Hardy's ratings of mathematicians based on pure talent on a scale from 0 to 100. Hardy gave himself a score of 25, Littlewood 30, Hilbert 80, and Ramanujan 100. Poor Littlewood! Although Littlewood is widely considered to be the greatest British mathematician of the twentieth century, in this list he suffered from Hardy's modesty: as Hardy did not want to rate himself highly, he brought down Littlewood considerably. (Most mathematicians consider the German David Hilbert (1862–1943) to be the greatest mathematician of the twentieth century.)

My admiration for Ramanujan has stayed with me for good, and I even passed it on to my future wife, but I never expected to have a chance to discover more about him than I could learn from Erdős. That came about when, fifty years ago, I was awarded a Title A Fellowship, and my wife and I had the great fortune to get to know Littlewood very well indeed. Soon, he was happy to talk about Ramanujan, revealing more than he had done before.

In January 1904 Ramanujan won a scholarship to the Government College, Kumbakonam, for his proficiency in Mathematics and English. However, he was so devoted to mathematics, eager to make new discoveries, that he neglected his studies, failed in the subsequent examination and lost his scholarship. Several more failures followed in Kumbakonam and Madras. When in 1907 he took the First Examination in Arts at the University of Madras, he failed English (badly) and Sanskrit (just), and he passed Mathematics with middling marks. When some years later Ramanujan became a Scholar at the University of Cambridge, an official in Madras wrote disapprovingly: "It certainly seems somewhat of a scandal to the University that a man like this should have failed in the FA Exam." I doubt that he was right, but perhaps Madras could have rewarded Ramanujan's amazing talent in mathematics by ignoring his performance in other subjects.

In the summer of 1909 Ramanujan's mother arranged a marriage between him and Janaki Ammal, the nine-year-old daughter of a distant relative. This marriage was more like an engagement in our society, and Janaki did not come to live in Ramanujan's house until 1912. After his marriage, Ramanujan was desperate for regular employment, but because of his unfortunate college history, he found this very difficult to obtain. Eventually, at the beginning of 1912 he became a clerk in the Madras Port Trust Office, earning 30 rupees a month (about 20 pounds a year). In the evenings he continued to work on mathematics and was very keen to show his results to mathematicians he

hoped might appreciate them. His labours slowly bore fruit: Seshu Aiyar and Ramachandra Rao befriended him, and the former mathematicians Narayana Aiyar and G. T. Walker also took to him. Nevertheless, there was nobody who could properly appreciate Ramanujan's results apart from the not-too-exciting papers he published in the *Journal of the Indian Mathematical Society* and the *Messenger of Mathematics*. (These papers can be belittled only in view of Ramanujan's later stature as a giant of mathematics.)

Urged on by his friends and well-wishers, Ramanujan communicated some of his discoveries to several major mathematicians in England; only one replied, and not even that reply was encouraging. Then Ramanujan decided to write to G.H. Hardy in Trinity, and that letter changed his life. The letter, dated 16 January 1913, went as follows:

Dear Sir,

I beg to introduce myself to you as a clerk in the Accounts Department of the Port Trust Office at Madras on a salary of only £20 per annum. I am now about 23 years of age. I have had no University education but I have undergone the ordinary school course. After leaving school I have been employing the spare time at my disposal to work at Mathematics. I have not trodden through the conventional regular course which is followed in a University course, but I am striking out a new path for myself. I have made a special investigation of divergent series in general and the results I get are termed by the local mathematicians as "startling"....

I have been developing this to a remarkable extent so much so that the local mathematicians are not able understand me in my higher flights. ...

I would request you to go through the enclosed papers. Being poor, if you are convinced that there is anything of value I would like to have my theorems published. I have not given the actual investigations nor the expressions that I get but I have indicated the lines on which I proceed. Being inexperienced I would very highly value any advice you give me. Requesting to be excused for the trouble I give you.

*I remain, Dear Sir, Yours truly,
S. Ramanujan*

P.S. My address is S. Ramanujan, Clerk Accounts Department, Port Trust, Madras, India.

The letter continues with dozens and dozens of bare statements of theorems, mostly formal identities extracted from his notebooks. It was rather unfortunate that Ramanujan's very first theorem, about the number of primes, was incorrect. But Hardy was not put off. As Littlewood told me, the day the letter arrived (at the end of January), Hardy told him about it, and the two of them discussed the statements at dinner, in the Combination Room when having port, and after that in Littlewood's rooms. Even if most of the statements had been false, the collection would have been a great topic of conversation. As it turned out, they found that some of the statements were incorrect, and some were correct but either known or could be deduced (by them!) from known results, but some others completely baffled them. Several of the statements they found extremely beautiful and totally mysterious. A great mathematician had emerged



Hardy and Littlewood in New Court in 1920 Photograph of H. Cramér

from nothing! Ramanujan's choice of Hardy could not have been better. Hardy was compassionate and the champion of the downtrodden: with the help of Littlewood, he was more likely than anyone to help Ramanujan.

That Hardy and Littlewood were thrilled by this letter was there for everyone to see in the College, as shown in this excerpt from a letter of Bertrand Russell (at the time one of the mathematics lecturers in the College) to Lady Ottoline Morrell on 2 February 1913:

In Hall I found Hardy and Littlewood in a state of wild excitement, because they believe they have discovered a second Newton, a Hindu clerk in Madras on £20 a year. He wrote to Hardy telling of some results he has got, which Hardy thinks quite wonderful, especially as the man has had only an ordinary school education. Hardy has written to the Indian Office and hopes to get the man here at once. It is private at present. I am quite excited hearing of it.

Although Hardy wasted no time in writing to the India Office in strong support of Ramanujan, he took his time in answering Ramanujan himself. Clearly, he did not want to send a superficial reply: he wanted to treat Ramanujan as a professional mathematician of high standing. In particular, he was not shy to point out that some of the results were incorrect. Eventually, he sent his reply on 8 February 1913:

Dear Sir,

I was exceedingly interested by your letter and by the theorems which you state. You will however understand that, before I can judge properly of the value of what you have done, it is essential that I should see proofs of some of your assertions. Your results seem to me to fall into roughly 3 classes: (1) there are a number of results which are already known, or are easily deducible from known theorems; (2) there are results which, so far as I know, are new and interesting, but interesting rather from their curiosity and apparent difficulty than their importance; (3) there are results which appear to be new and important, but in which almost everything depends on the precise rigour of the methods of proof which you have used. As instances of these 3 classes I may mention ...

Ramanujan's letter gave Hardy and Littlewood plenty to do, as they wanted to prove or disprove all its assertions. Although they were the best mathematicians

in England, this work took them quite a while. Here is an excerpt from a letter of Littlewood to Hardy from Treen in Cornwall after the Lent Term of 1913:

Dear Hardy,

The stuff about primes is wrong. (3) is the usual formula save for the terms coming from the zeros of $\zeta(s)$. It's known that ... From his formula it would follow that ... [and so a contradiction would follow].

And later:

I have a vague theory as to how his mistakes have come about. I imagine that he is satisfied if he can convince himself that his results are correct and he has probably staked on certain operations on divergent series involving primes being legitimate. His results are just what one would get if $\zeta(s)$ had no zeros in $\sigma > 0$

My hopes are that he has made important discoveries about continued fractions and elliptic functions. ... I can believe that he is at least a Jacobi.

...

How maddening is his letter in the circumstances. I rather suspect that he is afraid that you'll steal his work.

Hardy's letter to India immediately changed Ramanujan's fortune: Sir Francis Spring (1849–1933), the Chairman of the Madras Port Trust, and G.T. (later, Sir Gilbert) Walker (1868–1968), formerly Fellow of Trinity, who was the Senior Wrangler in 1889, the Director General of Observatories in India, obtained a special scholarship for him, which was tenable for two years. It paid Ramanujan 75 rupees a month, which was sufficient for a married Indian to live decently. This scholarship was indeed special – as the Registrar wrote to the Government: “The regulations of the University do not at present provide such a special scholarship. But the Syndicate assumes that Section XV of the Act of Incorporation and Section 3 of the Indian Universities Act, 1904, allow of the grant of such a scholarship, subject to the express consent of the Governor of Fort St George in Council.” Ramanujan left his clerical post on 1 May 1913, and from then on was a professional research mathematician for the rest of his life.

Cambridge

Hardy was anxious to bring Ramanujan to Cambridge, but as a Brahmin was not allowed to cross the ocean, Ramanujan declined to accept the offer, greatly

disappointing Hardy. In his continuing correspondence with Ramanujan, Hardy kept pointing out to no avail the advantages of even a short stay in Cambridge. But a few months later, things had changed.

At the beginning of 1914, Eric Neville (1889–1961), who was a Fellow of Trinity at the time, was invited to Presidency College, Madras, to deliver a course of lectures. (Neville first came to fame as Hardy’s favourite to be the Senior Wrangler in 1909, the last time the strict order of merit was decided in the Tripos. As it happened, Neville came second behind Percy Daniell (1889–1946) of Trinity and ahead of Louis Mordell (1888–1972) of St John’s.) Having been alerted by Hardy to the existence of Ramanujan, Neville’s gentle persuasion, modesty and unassuming manner worked wonders, so that, having obtained his mother’s permission, Ramanujan agreed to go to Cambridge. A substantial grant was obtained, which Ramanujan was happy to announce to Neville, with a request to take him to Cambridge:

Dear Sir,

I am happy to tell you that I am given a scholarship of £250 a year for at least one year and to be extended for one more year if the reports at Cambridge are favourable. I am starting on March 17 from Madras by the B.I. boat SS “Nevasa” and travel by sea throughout my journey. ...

I request that you will take me or at least send somebody to London as I am new to anything and everything.

And that is how it was: Neville asked one of his brothers, the proud owner of a Jowett motor car, to take him to meet Ramanujan and bring them back to their house in Chesterton Road. Ramanujan spent a few days with Neville and his wife, Alice, before moving into Trinity to start his very fruitful adventure in Cambridge. The Nevilles remained Ramanujan’s friends throughout his stay in England.

Ramanujan settled into his rooms in Whewell’s Court and started to get used to European ways. However, as a strict Brahmin, he never went to Hall to have his meals, and as there was no other Brahmin to cook for him, he had to cook for himself in his rooms. When the Great War broke out, that became even harder, as there were food shortages, especially of Indian comestibles. He was also obsessed with mathematics, so occasionally worked for 30 hours at a time, and then slept for 20. To save time, he tended to cook for several days, leaving the remnants of his meals in the cooking pot.



After the degree ceremony, with Ramanujan in the centre.

For the first time in his life, he was really comfortable, free of financial worries. He had no duties whatsoever and could do as he pleased. He wanted to get a Cambridge degree, and Hardy arranged that he could get his B.A. by research, so that he did not have to attend lectures. In 1916 Ramanujan was indeed awarded his B.A. As Ramanujan was frequently in contact with great mathematicians, who liked him and appreciated his work, he was in seventh heaven. In addition to Hardy and Littlewood, he was greatly supported by Major Percy Alexander MacMahon (1854–1929), who worked on number theory and combinatorics, two areas favoured by Ramanujan. MacMahon was the first British mathematician to write a book on combinatorics: in the first volume, published in 1914, he already popularized Ramanujan's achievements by having a chapter entitled *Ramanujan's Identities*.

In 1914 the teaching of Ramanujan was shared by Hardy and Littlewood, but that changed when Littlewood was called up. Hardy was worried that one man was far from enough to teach a genius like Ramanujan. In fact, he had sleepless nights about how to teach Ramanujan without destroying or even damaging his boundless confidence. He just could not have been more careful and loving in his relationship with Ramanujan, and in return Ramanujan never showed anything but boundless respect, trust and gratitude. Quoting Hardy:

What was to be done in the way of teaching him modern mathematics? The limitations of his knowledge were as startling as its profundity. Here was a man who could work out modular equations, and theorems of

complex multiplication, to orders unheard of, whose mastery of continued fractions was, on the formal side at any rate, beyond that of any mathematician in the world, who had found for himself the functional equation of the Zeta-function, and the dominant terms of many of the most famous problems in the analytic theory of numbers; and he had never heard of a doubly periodic function or of Cauchy's theorem, and had indeed but the vaguest idea of what a function of a complex variable was. ... All his results, new or old, right or wrong, had been arrived at by a process of mingled argument, intuition, and induction, of which he was entirely unable to give any coherent account.

It is impossible to ask such a man to submit to systematic instruction, to try to learn mathematics from the beginning once more. I was afraid too that, if I insisted unduly on matters which Ramanujan found irksome, I might destroy his confidence or break the spell of his inspiration. On the other hand, there were things of which it was impossible that he should remain in ignorance. Some of his results were wrong, and in particular those which concerned the distribution of primes, to which he attached the greatest importance. ... In a few years' time he had a very tolerable knowledge of the theory of functions and the analytic theory of numbers. He was never a mathematician of the modern school, and it was hardly desirable that he should become one; but he knew when he proved a theorem and when he had not. And his flow of original ideas shewed no symptom of abatement.

With Hardy's substantial assistance, Ramanujan could prepare his results for publication. Clearly, the write-up of Ramanujan's long paper (63 pages) on *highly composite numbers* owes more to Hardy than to Ramanujan. They also embarked on several joint projects. Their joint study of the 'normal number of prime factors' was based on Ramanujan's intuition and Hardy's technique. The later simpler proof by Paul Turán led Paul Erdős and Mark Kac to the foundation of probabilistic number theory. A major project of Hardy, Ramanujan and others concerned *the partition function* $p(n)$, the number of ways of writing n as a sum of positive integers. (Thus, $p(4) = 5$ since 4 can be written as 4, 3+1, 2+2, 2+1+1 and 1+1+1+1, while $p(5) = 7$, since 5 can be written as 5, 4+1, 3+2, 3+1+1, 2+2+1, 2+1+1+1 and 1+1+1+1+1.) The partition function seems very difficult to pin down, but, guided by Ramanujan's intuition and the help of MacMahon, who calculated *by hand* the first 200 values of $p(n)$, Hardy and Ramanujan managed to get an amazingly precise asymptotic formula for $p(n)$.

It is really very remarkable to get a result with an error of $O(n^{-3/2})$ which is a good aspect that with higher powers of n in this problem. Let C_2 be the S-series which is $O(\sqrt{n})$ and $R(n)$. Suppose now that s is about $\frac{\beta \sqrt{n}}{\log n}$ where $\beta = 4\pi\sqrt{3}$. Then $O \sum_{s \leq n} \frac{1}{s} e^{-\frac{\beta \sqrt{s}}{\log s}} = O(\sqrt{s} n^{-3/2}) = O(\log n)^{-3/2}$.

So would therefore follow from your arguments that the error by taking about $\beta \sqrt{n}/\log n$ terms is $O(\log n)^{-3/2}$. Again suppose that s is about $\frac{\alpha \sqrt{n}}{\log n}$ where $\alpha = \frac{4\pi\sqrt{3}}{3}$. Then $\frac{1}{s} e^{-\frac{\beta \sqrt{s}}{\log s}} = O\left(\frac{n^{1/2}}{\sqrt{s}}\right) = O(\log n)$.

It therefore appears that in order that $p(n)$ may be the nearest integer to the approximate sum s need not be taken beyond $\beta \sqrt{n}/\log n$ and cannot be taken before $\alpha \sqrt{n}/\log n$ (and very likely for every n too since all in the above equations appear to be not mere necessities of α) I hope you can easily prove these. Then the problem is completely solved. Major MacMahon was kind enough to send me a typewritten copy of the 200 numbers. The approximation gives the exact number. I think you know this already from him. With kind regards to your mother and sister

yours sincerely S. Ramanujan

Ramanujan's postcard to Hardy, urging him to prove a precise result. He also mentions Major MacMahon's help.

As is clear from the postcard above, it was only due to Ramanujan's belief in the possibility of a crazily good approximation that they got their result. The first five terms of their approximation give $p(200)$, although this number is enormous, 3972999029388.

Ramanujan writes:

It would therefore follow from your arguments that the error by taking about $\beta \sqrt{n}/\log n$ terms is $O(\log n)^{-3/2}$ It therefore appears that, in order that $p(n)$ may be the nearest integer to the approximate sum, s need not be taken beyond $\beta \sqrt{n}/\log n$ and cannot be taken before $\alpha \sqrt{n}/\log n$ I hope you can easily prove these. ... Major MacMahon was kind enough to send me a typewritten copy of the 200 numbers. The approximation gives the exact number. I think you know this already from him. With kind regards to your mother and sister.

Yours sincerely, S. Ramanujan

The method of proof of this Hardy–Ramanujan paper on partitions led to the powerful Hardy–Littlewood circle method, an important technique in analytic number theory. Ramanujan also proved remarkable divisibility properties of $p(n)$; e.g. if $n - 4$ is divisible by 5, so is $p(n)$, and if $n - 5$ is divisible by 7, so is $p(n)$. (As a sanity check, recall that $p(4) = 5$ and $p(5) = 7$.)

A favourite field of Ramanujan was the theory of modular equations. As Mordell wrote:

Some of these equations can be solved very simply, while the solution of others involves a wonderful collection of surds. It was chiefly in these subjects that Ramanujan's best work was done. They gave him ample scope for his exceptional and brilliant genius, which displayed such wonderful imagination, intuition and insight. For formal manipulation of infinite processes and an instinctive feeling for algebraical formulae, he was unrivalled since the time of Euler and Jacobi. His fertility in producing a host of strange and curious results was unbounded and ceased only with his death.

From P. C. Mahalanobis (1893–1972), the great statistician, we know of a lunch he had with Ramanujan. While Ramanujan was preparing their vegetarian meal, Mahalanobis read him a puzzle from *The Strand* magazine, which was roughly this. In a street the houses are numbered 1, 2, ..., n , where n is at least 50 and at most 500. My friend, who lives in number k , has noticed that the sum of the numbers smaller than his are equal to the sum of the numbers bigger than his. How many houses are in the street, and where does my friend live? To explain the question, let us take a smaller example. If there are at most ten houses in the street then the answer is that there are eight houses in the street and the friend lives in number 6, because $1 + 2 + 3 + 4 + 5 = 7 + 8$. After a little thought, Ramanujan replied: “there are 288 houses and the friend lives in 204”. “How could you do it so quickly?”, asked the amazed Mahalanobis. “By continued fractions”, came the reply.

Ramanujan's success in Cambridge was greeted with great enthusiasm in India. As Seshu Aiyer wrote in 1917, “the day on which he sailed to England will now become a red-letter day in the history of our national triumph and glory.” All went well with Ramanujan till the spring of 1917, when he fell ill. In May 1917 he was admitted to the Nursing Hostel in Thompson's Lane, which he left in September, only to return to another sanatorium in early October. From then on, he was in and out of various sanatoria. Towards the end of 1918 he was in Colinette House, Putney. It was Hardy's visit there that made the number 1729 memorable for all mathematicians. When Hardy said that the number of his cab, 1729, was boring, Ramanujan was amazed: “But Hardy, how can you say that? It is the smallest number which is the sum of two cubes in two different ways.” Indeed, $1729 = 10^3 + 9^3 = 12^3 + 1^3$. This is an example of Littlewood's opinion that “Every natural number was Ramanujan's personal friend.”

Matlock House
Matlocks

Dear Mr Hardy,

My words are not adequate to express my thanks to you. I did not even dream of the possibility of my election. When I opened your telegram I read the 'e Fellow Philosophical Society instead of Royal Society' - I came to know only very recently of my election to Cambridge Philosophical Society - and I was very much puzzled why you sent a telegram

from Piccadilly for that. It is only after some time that I read your telegram correctly.

Please convey my heart-felt thanks to Major MacMahon and Mr Littlewood. I am sorry I didn't write to them as I did not know their addresses.

Ever yours

S. Ramanujan

Fitzroy House
16 Fitzroy Square
London
Friday.

Dear Mr Hardy,

My heart-felt thanks for your kind telegram. After your successful election, I am elected by the Royal Society, my election at Trinity probably became very much less difficult this year.

My teeth extraction was to be done this morning, but the dentist was not able to come as he was indisposed. I have not been very well since you saw me, and my temperature has been as irregular and high as was at Matlock. Dr Bolton thinks that my feverish attacks and my rheumatic pain are both due to my teeth. His idea explains very well the shivering-pain and no other doctor gave any cause for the pain. But I can't see any connection between the teeth and the feverish attacks which relaxed my body and which existed long before anything was wrong in my teeth. I shall just remove one or two teeth for the present and I do not want to trouble with the other ones now.

Yours ever

S. Ramanujan

Ramanujan's letters about his election to the Royal Society.

As to the nature of Ramanujan's illness, there have been many suggestions. First, he was believed to have a gastric ulcer: later that diagnosis was changed to tuberculosis, and then to metastatic liver cancer. Upon his return to India, the firm verdict was again tuberculosis. The most recent diagnosis, proposed over seventy years after Ramanujan's death, is hepatic amoebiasis. It is likely that Ramanujan had dysentery already in his teens. In early 1918 or so Ramanujan attempted suicide by throwing himself in front of an underground train which, fortunately, stopped just in time. Ramanujan was arrested, and Hardy personally intervened to get him released, as a suicide attempt was a criminal offence. It is possible that Ramanujan was discharged into the care of Hardy with the condition that he stay under medical supervision for twelve months. Throughout his illness, he continued to work, although rather spasmodically, till the very end. By the end of 1918 he seemed to be better and, since it was suspected that the climate in England was retarding his full recovery, he left England at the end of February 1919, arriving in Madras at the beginning of April. In spite of the excellent medical care that he received, his health remained precarious.

Towards the end of his life, two great honours were bestowed on him: he was the first Indian to receive either of these honours. First, in 1917, Hardy, Littlewood and MacMahon nominated him for a Fellowship of the Royal Society. It is a tribute to the standing of the proposers and to the genius of Ramanujan that he was elected on the first occasion, on 28 February 1918. Then, in October, Hardy and Littlewood managed to get Ramanujan a Fellowship at Trinity. In fact, contrary to what Ramanujan imagined, this election was not straightforward: Littlewood got two doctors' certificates of the soundness of Ramanujan's mind which, eventually, he did not have to use. The Prize Fellowship awarded to Ramanujan was worth £250 a year for six years.

Hardy immediately wrote to the Registrar of the University of Madras: "He will return to India with a scientific standing and reputation such as no Indian has enjoyed before, and I am confident that India will regard him as the treasure he is." In response to this the University of Madras awarded Ramanujan £250 a year for five years. Ramanujan's response was extraordinary, showing what an exceptional man he was. It is impossible not to be touched by Ramanujan's modesty, warm heart and generosity. Here is his letter in full.

2 Colinette Road, Putney, S.W. 15
11th January 1919

To The Registrar,
University of Madras.

Sir,

I beg to acknowledge the receipt of your letter of 9th December 1918, and gratefully accept the very generous help which the University offers me. I feel, however, that, after my return to India, which I expect to happen as soon as arrangements can be made, the total amount of money to which I shall be entitled will be much more than I shall require. I should hope that, after my expenses in England have been paid, £50 a year will be paid to my parents and that the surplus, after my necessary expenses are met, should be used for some educational purpose, such in particular as the reduction of school-fees for poor boys and orphans and provision of books in schools. No doubt it will be possible to make arrangements about this after my return. I feel very sorry that, as I have not been well, I have not been able to do so much mathematics during the last two years as before. I hope that I shall soon be able to do more and will certainly do my best to deserve the help that has been given me.

*I beg to remain, Sir,
Your most obedient servant,
S. Ramanujan.*

Return to India

Back in India, Ramanujan worked ferociously, whenever his illness allowed it, producing more of his astonishing formulae. He worked much on q -series and collected his results in a notebook that was to be named his “lost notebook.” He sent only one letter to Hardy, about the introduction of his mock-theta functions, which turned out to be very important. Sadly, in spite of the best medical care and the improved climate, he died on 26 April 1920.

Ramanujan’s Legacy

Today, Ramanujan’s star is higher than ever before. The results in the notebooks left behind by Ramanujan are most attractive to an expert, but also very demanding. The great Hungarian analyst George Pólya (1887–1985), who put the Stanford Mathematics Department on the map, and with whom Hardy and Littlewood wrote their fundamental book on inequalities, was captivated

by Ramanujan's formulas. One day in 1925, while he was visiting Oxford, he borrowed Hardy's copy of Ramanujan's notebooks. A couple of days later, he hastened to return them, explaining that however long he would keep them, he would try to verify formulas therein and never again would have time to prove another original theorem. The mathematics community owes a great debt of gratitude to George Andrews and Bruce Berndt for their monumental work on Ramanujan's notebooks, helping all to appreciate Ramanujan's achievements. Also, Andrews was the mathematician who located Ramanujan's last notebook in the Wren Library, and he brought it to the attention of the public as 'Ramanujan's Lost Notebook'. Ramanujan's ideas turn up in an impossibly wide range of fields, including analytic number theory, sphere packing, three-manifold quantum invariants, black holes, string theory, the theory of partitions, signal processing, and Ramanujan graphs.

Postscript

It is regrettable that the 2015 Hollywood film about Ramanujan (*The Man Who Knew Infinity*) was so unfair to Trinity, England, Hardy, Littlewood and MacMahon. And most people learn about Ramanujan from that film. Hardy and Littlewood (and Trinity) deserve enormous credit for their immediate support of Ramanujan. There was never any friction between Hardy and Ramanujan: there was no 'boxing match' between them, as in the film, with Ramanujan grumbling that he did not come to Cambridge to learn mathematics but to publish his results. Hardy, Littlewood and MacMahon were totally colour blind, anything but racist. In particular, rather than looking down on Ramanujan, as in that film, Major MacMahon was a great supporter of his. And so on. Both the popular book about Ramanujan and the Hollywood film came about because of a documentary that was broadcast in 1987 in the Equinox series. This documentary, entitled *Letters from an Indian Clerk*, was made by Christopher Sykes; it can be found on youtube: <https://www.youtube.com/watch?v=OARGZ1xXCxs>. The film has an interview with Janaki Ammal, Mrs Ramanujan. Sykes found her living in appalling poverty, so after the film had been finished, I applied to the College Council for generous monthly support for her, which was granted without any hesitation.



FELLOWS, STAFF, & STUDENTS

THE MASTER AND FELLOWS
APPOINTMENTS AND DISTINCTIONS
IN MEMORIAM
EIGHTIETH BIRTHDAY SPEECHES
COLLEGE NOTES





The Fellowship

The Master and Fellows

October 2020

Master

(Appointed 2019) **Professor Dame Sally Davies** GCB, DBE, FRS, FMedSci

Fellows

Elected

- 1993 D **Professor Grae Worster** Applied Mathematics. *Vice-Master*
- 1958 E **Mr John Easterling** Classics. *Senior Fellow*
- 1957 E **Professor Amartya Sen** Welfare Economics. *Former Master (1998–2004)*
- 2012 E **Lord Martin Rees of Ludlow** Cosmology. *Former Master (2004–2012)*
- 1991 E **Sir Gregory Winter** Molecular Biology. *Former Master (2012–2019)*
- 1958 E **Dr Andrew McLachlan** Molecular Biology
- 1960 E **Professor Ian Glynn** Physiology
- 1961 E **Dr Anil Seal** Indian History
- 1964 E **Dr Neil Hamer** Chemistry
- 1964 E **Professor John Lonsdale** African History
- 1966 E **Dr Ronald Ferrari** Electrical Engineering

- 1966 E **Lord Julian Hunt of Chesterton** Applied Mathematics
- 1967 E **Dr Brian Mitchell** Economic History
- 1968 E **Dr Chris Morley** Engineering. *Secretary of Council*
- 1969 E **Professor Brian Josephson** Condensed Matter Physics
- 1970 E **Professor Béla Bollobás** Pure Mathematics
- 1971 E **Lord Garry Runciman** Sociology
- 1971 E **Professor Hugh Osborn** Theoretical Physics
- 1971 E **Professor John Hinch** Applied Mathematics. *Secretary to the Fellowship Electors*
- 1972 E **Dr Graham Chinner** Earth Sciences
- 1973 E **Professor Philip Allott** International Public Law
- 1974 E **Dr Douglas Kennedy** Statistics
- 1974 E **Professor Boyd Hilton** Modern British History
- 1974 E **Professor Andrew C. Crawford** Physiology. *Steward*
- 1975 E **Professor Adrian Poole** English Literature. *Temporary Tutor*
- 1975 E **Dr Alan Weeds** Biochemistry
- 1976 E **Professor Simon Keynes** Anglo-Saxon History
- 1976 E **Professor John Rallison** Fluid Dynamics
- 1977 E **Professor Gil Lonzarich** Quantum Physics
- 1977 D **Professor Stephen Elliott** Chemical Physics
- 1978 E **Professor Alan Windle** Nanomaterials
- 1978 B **Professor John Marenbon** History of Philosophy. *Secretary to the Honorary Fellows' Committee; Special (Public) Lectures Co-ordinator*
- 1979 E **Professor Hashem Pesaran** Financial Economics
- 1980 E **Professor Keith Moffatt** Applied Mathematics
- 1980 E **Dr Arthur Norman** Computer Science
- 1981 E **Dr Ronald Nedderman** Fluid Dynamics

- 1981 E **Professor Pelham Wilson** Mathematics
- 1982 E **Professor Nicholas Postgate** Assyriology
- 1982 E **Professor Sir Michael Pepper** Semiconductors
- 1983 E **Professor Nick Kingsbury** Signal Processing
- 1983 C **Mr Nicholas Denyer** Ancient Greek Philosophy
- 1983 C **Dr Neil Hopkinson** Classics
- 1984 E **Professor Christopher Lowe** Biotechnology
- 1985 C **Dr Mark Chinca** German
- 1986 E **Professor David McKitterick** *Former Librarian*
- 1986 E **Professor Malcolm Perry** Theoretical Physics
- 1986 E **Dr Stephen Satchell** Financial Economics
- 1987 E **Professor Robin Carrell** Haematology
- 1987 E **Dr Nigel Unwin** Molecular Biology
- 1989 E **Professor Roger Paulin** German
- 1989 E **Professor Piero Migliorato** Electrical Engineering
- 1990 C **Dr Hugh Hunt** Dynamics. *Tutor*
- 1990 C **Dr Paul Wingfield** Musicology. *Temporary Tutor; Editor of Annual Record*
- 1990 E **Professor Nicholas Shepherd-Barron** Pure Mathematics
- 1991 E **Professor David Khmel'nitskii** Condensed Matter Physics
- 1992 E **Dr Jeremy Fairbrother** *Former Senior Bursar; Senior Treasurer for Student Union; Finance Secretary*
- 1992 E **Dr Mark Morris** Japanese Studies
- 1993 E **Professor Steven Ley** Organic Chemistry
- 1993 E **Mr Paul Simm** *Former Junior Bursar; Keeper of the College Pictures; Secretary: Wine Committee*
- 1993 E **Professor Kevin Gray** Comparative Law
- 1993 E **Professor Roger Keynes** Physiology

- 1994 D **Professor Sir Shankar Balasubramanian** Chemistry
- 1994 C **Dr Jean Khalfa** French. *Fellow for International Programmes*
- 1994 D **Professor Valerie Gibson** Particle Physics
- 1995 D **Professor Sir Timothy Gowers** Pure Mathematics
- 1995 D **Professor Simon Baron-Cohen** Experimental Psychology
- 1996 D **Professor Catherine Barnard** European Law; Employment Law.
Senior Tutor
- 1996 C **Dr Richard Serjeantson** Early Modern History
- 1997 E **Professor Colin Hughes** Pathology
- 1997 D **Professor John Lister** Applied Mathematics. *Secretary:
Expenditure Committee*
- 1997 C **Professor Sachiko Kusukawa** Early Modern Science.
Dean of College
- 1997 C **Professor Tessa Webber** Palaeography
- 1998 C **Dr Rupert Gatti** Game Theory
- 1998 C **Professor Emma Widdis** Russian
- 1998 E **Dr Susan Daruvala** Chinese Studies
- 1998 C **Ms Erica Segre** Spanish
- 1999 D **Professor Dame Lynn Gladden** Microstructure
- 1999 C **Ms Jo Miles** Family Law
- 2000 C **Professor Peter Sarris** Medieval History
- 2000 D **Professor Ali Alavi** Theoretical Chemistry
- 2000 D **Professor Imre Leader** Pure Mathematics. *Admissions Tutor
(Maths & Sciences)*
- 2000 D **Professor Marian Holness** Petrology
- 2000 C **Dr Alyce Mahon** Modern Art
- 2001 E **Professor Simon Blackburn** Ethics; Epistemology
- 2001 C **Professor Joan Lasenby** Signal Processing, *Treasurer Field Club*

- 2001 E **Professor Douglas Fearon** Immunology
- 2001 D **Professor Richard Hunter** Greek
- 2001 C **Dr Anne Toner** English Literature. *Tutor*
- 2001 D **Professor Gabriel Paternain** Pure Mathematics
- 2002 E **Professor Gary Gibbons** Theoretical Physics
- 2002 C **Dr Tom Fisher** Pure Mathematics
- 2002 D **Professor Rebecca Fitzgerald** Physiology. *Adviser for Women Students*
- 2002 C **Dr Sean Holden** Artificial Intelligence
- 2003 C **Dr Louise Merrett** Commercial Law. *Admissions Tutor (Arts & Humanities)*
- 2004 C **Dr Glen Rangwala** Politics. *Director of Admissions*
- 2005 D **Professor Judith Driscoll** Device Materials
- 2005 C **Dr Michael Tehranchi** Statistics
- 2006 C **The Reverend Dr Michael Banner** Religious Ethics. *Dean of Chapel; Chair of Alumni Relations and Development*
- 2006 C **Mr Rory Landman** Senior Bursar
- 2006 B **Dr Jeremy Butterfield** Philosophy of Physics. *Fellow for Postdoctoral Affairs*
- 2006 E **Professor Philip Hardie** Latin and Neo-Latin Literature
- 2006 C **Mr Stephen Layton** Director of Music
- 2006 D **Professor Matthew Juniper** Dynamics
- 2006 E **Dr Rod Pullen** *Former Junior Bursar*
- 2006 B **Professor Angela Leighton** Poetry
- 2006 D **Professor Nicholas Thomas** Historical Anthropology
- 2007 C **Professor Joya Chatterji** South Asian History
- 2007 C **Professor Malte Grosche** Condensed Matter Physics
- 2007 D **Professor Harvey Reall** Theoretical Physics

- 2007 D **Professor Zoran Hadzibabic** Atomic Physics
- 2007 D **Professor David Spring** Organic Chemistry. *Tutor*
- 2007 D **Professor Jason Chin** Biochemistry
- 2008 E **Dr David Washbrook** South Asian History
- 2008 C **Dr Stuart Haigh** Geotechnical Engineering. *Tutor*
- 2009 D **Professor David Tong** Theoretical Physics
- 2011 C **Dr John Rudge** Applied Mathematics
- 2011 B **Dr Heonik Kwon** Social Anthropology
- 2011 D **Professor Dame Sarah Worthington** Commercial Law
- 2011 C **Dr Cameron Petrie** Middle Eastern Archaeology
- 2011 D **Professor Oliver Linton** Econometric Theory
- 2012 D **Professor Patrick Maxwell** Clinical Medicine
- 2012 C **Dr Adam Boies** Energy Engineering. *Tutor*
- 2013 D **Professor Didier Queloz** Exoplanets
- 2013 D **Professor Joel Robbins** Social Anthropology
- 2013 C **Professor Eric Lauga** Fluid Dynamics. *Tutor*
- 2013 C **Dr David Skinner** Theoretical Physics
- 2013 C **Dr Tiago Cavalcanti** Macroeconomics
- 2014 C **Dr Henry Wilton** Pure Mathematics
- 2014 C **Dr Claudio Castelnovo** Condensed Matter Physics
- 2014 C **Dr Sean Curran** Medieval Music
- 2015 C **Dr Nicolas Bell** Librarian; *Tutor*
- 2015 C **Professor Frank Stajano** Computer Security
- 2015 C **Professor Cate Ducati** Nanomaterials. *Tutor*
- 2015 C **Dr Debopam Bhattacharya** Microeconomics
- 2015 C **Professor Jason Miller** Statistics
- 2016 D **Professor Mickey Adolphson** Japanese Studies

- 2016 B **Professor Michael Cates** Soft Matter Physics
- 2016 B **Professor Gregory Hannon** Oncology
- 2016 C **Dr Andrew Sederman** Magnetic Resonance
- 2016 C **Dr Catherine Aiken** Obstetrics and Gynaecology
- 2016 C **Dr Milka Sarris** Cell Biology
- 2016 C **Professor Per Ola Kristensson** Interactive Systems
- 2016 C **Dr Benjamin Spagnolo** Public Law
- 2017 C **Dr Richard Hayward** Cellular Microbiology
- 2017 A **Dr Erik Clark** Development and Evolution
- 2017 A **Dr Hannah Stern** Physics
- 2017 A **Dr Katarzyna Kowal** Applied Mathematics
- 2017 A **Dr Alex Kendall** Engineering
- 2017 A **Dr George Roberts** History
- 2017 A **Dr Thomas Hutchcroft** Pure Mathematics
- 2017 A **Dr Partha Shil** History
- 2017 A **Dr Kirsten Macfarlane** Intellectual History
- 2018 C **Dr Anna-Maria Hartmann** English
- 2018 C **Professor Ewa Paluch** Medical Sciences
- 2018 A **Dr Rohit Chikkaraddy** Physics
- 2018 A **Dr Jose Martinez** Politics
- 2018 A **Dr Jessica Lightfoot** Classics
- 2018 A **Dr Aled Walker** Pure Mathematics
- 2018 A **Dr Hannah Shepherd** History
- 2018 A **Dr Adi Steif** Genome Science and Technology
- 2018 A **Dr Jitka Stollova** Literature
- 2018 A **Dr Ewain Gwynne** Pure Mathematics
- 2018 C **Professor Samita Sen** History

- 2019 C **Mr Edward Knapp** Junior Bursar
- 2019 C **Dr Neel Krishnaswami** Computer Science
- 2019 C **Dr Marta Zlatic** Neuroscience
- 2019 B **Dr John Sutherland** Chemistry
- 2019 B **Professor Caucher Birkar** Pure Mathematics
- 2019 C **Dr Aleks Reinhardt** Chemistry
- 2019 A **Dr Carys Brown** History
- 2019 A **Dr Auriol Rae** Natural Sciences
- 2019 A **Dr Allison Neal** English Literature
- 2019 A **Dr Luca Zenobi** History
- 2019 A **Dr Aleksander Doan** Pure Mathematics
- 2019 A **Dr Bingqing Cheng** Computational Chemistry
- 2019 A **Dr Jesse Liu** Physics
- 2019 A **Dr Alexandros Eskenazis** Pure Mathematics
- 2019 D **Mr Luke Syson** Director of the Fitzwilliam Museum
- 2019 C **Dr Christopher Rauh** Economics
- 2020 C **Mr Richard Turnill** *Assistant Bursar*
- 2020 C **Dr Julia Borcharding** Philosophy
- 2020 A **Dr Oliver Mayeux** Linguistics
- 2020 A **Dr Robert Rohland** Classics
- 2020 A **Leanne Williams Green** Anthropology
- 2020 A **Richard Calis** History
- 2020 A **Matthew Colbrook** Applied Mathematics
- 2020 A **Malcolm Hodgskiss** Earth Sciences
- 2020 A **Hunter Spink** Pure Mathematics
- 2020 A **Maximillian McGinley** Physics

Titles under which Fellowships are held:

- A Junior Research Fellows** are elected in an open competition normally decided at the start of each calendar year. Their Fellowships are normally tenable for four years.
- B Senior Research Fellows** are established scholars capable of 'contributions of high value' to their subject. Tenable for five years, a Senior Research Fellowship may be extended for further periods of five years, as long as the holder is actively engaged in research.
- C** Appointment to a **Qualifying College Office** confers eligibility to hold a Fellowship under Title C. College officers include College Lecturers, the Dean of Chapel, the Bursars, and the Librarian.
- D** Eligibility for these **Professorial Fellowships** is restricted to those who hold a University Professorship or a University office of similar standing (e.g. Registrar, University Librarian). Some Professors, previously Fellows under Title C, choose to retain their College Lectureships on being promoted to Professor, and remain members of the College teaching staff as College Senior Lecturers, as is indicated in the list above.
- E** These are **retired Fellows** who, to qualify, must first have served as a Fellow under Title B, C, or D for a specified number of years. Anyone who qualifies for a Fellowship under Title E is entitled to hold it for life.
- F** These are **Visiting Fellowships** awarded only to those who are not normally resident in Cambridge; are primarily concerned with the furtherance of education, learning, or research; and are here for a period of not more than two years.

Honorary Fellows

Elected

- 1977 **H.R.H. Philip Duke of Edinburgh**
- 1988 **H.R.H. Charles Prince of Wales**
- 1989 **Rt Hon Lord James Mackay of Clashfern**
- 1991 **Professor Sir John Elliott**
- 1991 **Professor Walter Gilbert**

- 1999 **Professor Lord Alec Broers**
- 1999 **Dame Marilyn Strathern**
- 2000 **Professor Jeffrey Goldstone**
- 2000 **Professor Ian Hacking**
- 2003 **Sir Antony Gormley**
- 2004 **Professor Sir Richard Friend**
- 2005 **Professor Jared Diamond**
- 2005 **Judge Stephen Schwebel**
- 2006 **Rt Hon Lord Robert Walker of Gestingthorpe**
- 2007 **Professor Sir Peter Lachmann**
- 2009 **Dr Peter Goddard**
- 2009 **Judge Hisashi Owada**
- 2010 **Professor Sir Partha Dasgupta**
- 2011 **Sir Noel Malcolm**
- 2011 **Sir Andrew Wiles**
- 2013 **Rt Hon Lord Robert Carnwath of Notting Hill**
- 2013 **Professor Michael Klein**
- 2014 **Reverend Canon John Polkinghorne**
- 2014 **Dr Stuart Parkin**
- 2014 **Professor Sir Mark Pepys**
- 2015 **Professor Christopher Garrett**
- 2015 **Professor Anthony Grafton**
- 2015 **The Most Revd and Right Hon Justin Welby**
- 2016 **Professor Bryan Birch**
- 2016 **Professor Roy Kerr**
- 2016 **Professor Daan Frenkel**
- 2017 **Professor Stephen Toope**
- 2017 **Rt Rev Richard Chartres**
- 2017 **Professor Sir Tony Cheetham**

- 2017 **Mr Anand Panyarachun**
- 2017 **Professor Martin Rudwick**
- 2018 **Professor Simon Schaffer**
- 2018 **Ms Judith Weir**
- 2019 **Professor Venki Ramakrishnan**
- 2019 **Professor Dominic Lieven**

Regius Professors on the Foundation

- 2012 **Professor Geoffrey Khan** Hebrew

Whewell Professor of International Law

- 2016 **Professor Eyal Benvenisti**

Fellow Commoner in the Creative Arts (FCCA)

Ms Ali Smith *Senior Fellow Commoner*

Mr Guy Gunaratne

Lector

- 2015 **Dr Felice Torrisi**

Past Fellows with Undertaking under Ordinance XIII.4

- 2015 **Dr Mireia Crispin Ortuzar**
- 2015 **Dr Tom Hamilton**
- 2015 **Dr Edouard Hannezo**
- 2015 **Dr Micha Lazarus**
- 2016 **Dr Edgar Engel**
- 2016 **Dr Duncan Hardy**
- 2016 **Dr Jessica Fintzen**

- 2016 **Dr Beñat Gurrutxaga Lerma**
2016 **Dr Aaron Kachuck**
2016 **Dr Gunnar Peng**

Temporary Lecturers

- 2019 **Dr Carlos Fonseca**
2019 **Dr Michal Kwasigroch**
2019 **Dr Gabriel Balmus**
2019 **Dr Dan Larsen**
2019 **Dr Damian Valdez**
2019 **Dr Clare Walker Gore**
2019 **Dr Alexander Freer**

Privileges of Future Emeritus Fellows

- 2019 **Professor Sir David Baulcombe**
2019 **Professor Paul Brakefield**
2019 **Professor Venki Ramakrishnan**
2019 **Professor Dominic Lieven**
2020 **Professor Huw Price**

Senior Postdoctoral Researchers

- 2018 **Dr Mona Shehata**
2018 **Dr Srinjan Basu**
2019 **Dr Theo Dunkelgrün**
2019 **Dr Paul Rimmer**
2019 **Dr Robert Slager**

Appointments and Distinctions

Cambridge University Promotions

- 2014 **C. Castelnovo**, Professor, University of Cambridge
- 1994 **S. K. Haigh**, Reader, University of Cambridge
- 1978 **J. A. Marenbon**, Honorary Professor, University of Cambridge
- 1997 **S. Kususkawa**, Honorary Professor, University of Cambridge

Academic Honours and Distinctions

- 1996 **C. S. Barnard**, Fellow, British Academy.
- 2007 **A. K. Cheetham**, Knight Bachelor, for services to material chemistry, to UK science and to global outreach.
- 2019 **S. Davies**, Dame Grand Cross of the Order of the Bath (GCB), for services to public health and research; Honorary Doctorate, University of St Andrews.
- 2019 **C. Fonseca** *Natural History: A Novel*.
- 1999 **L. F. Gladden**, Dame Commander of the Order of the British Empire (DBE) for services to academic and industrial research in Chemical Engineering.
- 2019 **G. Gunaratne**, Dylan Thomas Prize 2019; Jhalak Prize 2019; Authors' Club Best First Novel Award, for *In Our Mad and Furious City*.
- 2016 **G. J. Hannon**, Fellow, American Association of Cancer Research Academy.
- 2000 **M. B. Holness**, Fellow, Royal Society.
- 1966 **J.C.R. Hunt**, George Stephenson Medal, Institution of Civil Engineers.
- 1997 **S. Kusukawa**, *The Collectors: Creating Hans Sloane's Extraordinary Herbarium*, (contributor).

- 2006 **S.D. Layton**, MBE for services to classical music.
- 2011 **O. B. Linton**, *Financial Econometrics; Fractals: On The Edge Of Chaos*.
- 2002 **A. Mahon**, *The Marquis de Sade and the Avant-Garde*.
- 1971 **H. Osborn**, Fellow, Royal Society.
- 1975 **A. D. B. Poole**, *The Princess Casamassima* (Editor).
- 2013 **D. Queloz**, Nobel Prize for Physics 2019; Fellow, Royal Society.
- 1957 **A.K. Sen**, Peace Prize 2020, German Book Trade.
- 2016 **C. Walker Gore**, *Plotting Disability in the Nineteenth-Century Novel*.
- 1992 **G. P. Winter**, Honorary Doctorate, University of Sydney.
- 2011 **S.E. Worthington**, Dame Commander of the Order of the British Empire (DBE) for services to English private law.
- 2019 **M. Zlatić**, Francis Crick Medal and Lecture 2020, Royal Society; Member, European Molecular Biological Organisation (EMBO).



Joanna Cooney

In Memoriam



Family/The Times

Professor Horace Basil Barlow FRS (1921–2020)

Great-grandson of Charles Darwin who discovered how our eyes filter our surroundings to help us to understand them.

Common sense dictates that our eyes show us the world as it is, but this is not the case. In fact, they select the information that helps us to navigate the world, which the brain then turns into a seamless approximation of our surroundings. The brain’s capacity to do this is a predictable outcome of natural selection: animals that are able to filter relevant from irrelevant information can move more nimbly through the world than those overwhelmed by the complexity of their surroundings.

The relevance of sensory data, meanwhile, depends on the species – the scurrying of a mouse is more interesting to a hawk than to a cow – so each species sees a different approximation of the world. Few scientists have done more to aid our understanding of how the eyes and the brain co-create that approximation than Horace Barlow, the great-grandson of Charles Darwin.

As a postgraduate at Cambridge from 1947–50, under the supervision of the Nobel prizewinning physiologist Edgar Adrian, he studied the eyes of frogs and found that particular neurons within the retina fired nerve impulses in response to a moving dot of light. He theorised that these neurons had the job of noticing small, quick-moving objects, thus enabling the frog to see flies and catch them. Barlow was the first to realise that nerve cells within the eye detect particular “trigger features” in the visual scene that cause the animal to behave a certain way.

In 1953, when he was a research fellow at Trinity College, Cambridge, Barlow made another discovery in his work on the frog’s retina. He wanted to find out how accurately neurons add up the signals they receive from photoreceptors – cells in the eye that detect light. He found that as he increased the size of the dot of light shining on the eye, the neuron would send more impulses to the brain, as he expected. Yet beyond a certain size, increasing the size of the dot would actually decrease the number of impulses. Barlow realised that surrounding photoreceptors must be inhibiting the neuron, thus filtering out superfluous information.

This discovery confirmed Barlow's hunch that the purpose of the visual system is to eliminate redundant information. He was fond of the dictum of the philosopher William James, that "the sense of sameness is the very keel and backbone of our thinking".

Horace Basil Barlow was born in 1921 in Chesham Bois, the son of Sir Alan Barlow, a civil servant, and Nora (née Darwin). His mother passed her forebear's curiosity about the natural world on to him. Barlow was educated at Winchester College, where he was enthused by physics, but began to doubt his abilities when placed in a class with James Lighthill and Freeman Dyson, who became outstanding mathematicians, and Christopher Longuet-Higgins, who became a theoretical chemist. Instead, he focused on biology.

With the Second World War looming, Barlow studied natural sciences at Trinity College, Cambridge, with the intention of helping the war effort as a doctor. He joined the Natural Science Club, to which he gave a talk on the perception of colour.

He did his clinical training at Harvard Medical School and University College Hospital, London, then heard that Adrian might be able to offer him a studentship to conduct research back in Cambridge. "Pinning Adrian down was never easy," Barlow recalled. He finally got his attention by stepping out in front of his bicycle.

In their meeting, Adrian, a standoffish man, dismissed all Barlow's ideas, and asked him instead to follow up on research by Marshall and Talbot into small eye movements. Barlow spent six months studying their hypothesis that these movements made vision more acute, then decided with characteristic boldness that it was bunk and instead began his study of frogs' retinas.

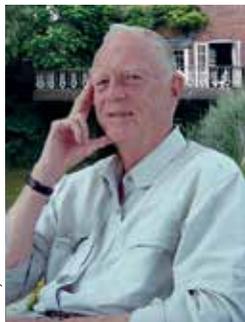
In 1964 he left Cambridge to become professor of physiology at the University of California, Berkeley. He later returned to Cambridge, where he was Royal Society research professor of physiology, and a fellow of Trinity College. He could still be found in his office in his nineties, and loved college life, especially the serendipitous conversations with whoever happened to sit next to him at high table. He liked to hear about subjects other people were working on, and when he broached the topic of his own work it would often be from an aslant angle – for instance, its relevance to the observation of art. An amateur cellist, he played in an orchestra in Cambridge and several quartets.

He met his first wife, Ruthala Salaman, through their families; hers, like his, had an illustrious scientific pedigree. Her grandfather Redcliffe Salaman had bred blight-resistant potatoes. They married in 1954 and had four children, Rebecca, a mathematician, Natasha, a doctor, Naomi, an artist, and Emily, a Hebraist and foster carer. His marriage to Salaman ended in 1970. He met his second wife, Miranda Weston Smith, when she asked him to contribute to an encyclopaedia of things we don't know. They married in 1980 and had one son, Oscar, an IT consultant, and two daughters, Ida, a neuroscientist, and Pepita, an economist.

Ever the discerning statistician, he reckoned that his relatives' longevity augured well for him, and he was right.

Horace Barlow, neuroscientist, was born on December 8, 1921. He died on July 5, 2020, aged 98.

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Family

Professor Sir Michael John Berridge FRS (1938–2020)

Sir Michael Berridge, biochemist behind a paradigm shift in cell science.

His research on the salivary glands of the blowfly shed light on the biology of disease from cancer to neurological diseases.

Sir Michael Berridge, who has died aged 81, was a physiologist and biochemist whose discovery of the mechanism whereby cells convert external stimuli into the internal signals that govern their behaviour led to a paradigm shift in scientific understanding of cell regulation and shed light on the biology of disease from cancer to cardiovascular and neurological diseases.

Scientists discovered long ago that proteins, such as growth factors or hormones, act as messengers in the body, but most of them stop short at the membrane that surrounds the cell. Inside the cell, calcium ions seemed to be responsible for triggering different types of cell behaviour, but the mystery was how signals from outside were carried into the cell to mobilise calcium.

Berridge's studies on cell signalling began with research on the salivary gland of the blowfly, where he established that cyclic adenosine monophosphate (cyclic AMP) and calcium worked together as intracellular "second messengers" to control fluid secretion. Others had shown how receptors within the cell membrane translate external stimuli into production of cyclic AMP, but the links to calcium signals were not known.

Berridge devised methods that exploited the ability of insect salivary glands to secrete copious amounts of saliva which they must do if the fly is to feed before being swatted. This preparation allowed him to show that external stimuli caused the formation of an intracellular molecule called inositol trisphosphate (IP3) by degrading a component of the membrane around the cell.

He described his discovery as "a eureka moment" and the paper, published in Nature in 1983, in which he set out for the first time the role of IP3 as a calcium-mobilising messenger, became one of the most cited in the field.

While his early work on fly spittle had been considered arcane by many, it paved the way for the discovery of the links between extracellular stimuli and calcium signals.

It quickly became clear that IP3 was a ubiquitous intracellular messenger, and that its ability to release calcium from intracellular stores regulated processes as diverse as fertilisation, development of the early embryo, muscle contraction, communication between nerve cells, blood clotting and much more, including cell death.

Berridge's influential reviews and beautifully crafted talks brought the significance of IP3 signalling to a wide audience, and recognition that it also provided insight into diseases as diverse as cancer, bipolar disorder, cardiovascular disease and Alzheimer's disease.

Michael John Berridge was born on October 22 1938 in Southern Rhodesia (now Zimbabwe). Inspired by a childhood love of nature and an enthusiastic biology teacher, he read Zoology and Chemistry at the University of Rhodesia and Nyasaland.

After graduating with a First, he won a Commonwealth Scholarship to do a PhD on nitrogen excretion in the African cotton stainer (a red bug) at the University of Cambridge under the entomologist Sir Vincent Wigglesworth.

He became interested in how hormones stimulate insect cells to secrete saliva and went on to do postdoctoral research on cell signalling at the University of Virginia in Charlottesville, and then at Case Western Reserve University in Cleveland.

Returning to Cambridge in 1969, he became senior, and later principal, scientific officer of the Agricultural and Food Research Council Unit of Invertebrate Chemistry and Physiology at the university's Department of Zoology. He served as senior principal scientific officer of the Unit of Insect Neurophysiology and Pharmacology from 1978 until 1990. He was also appointed a fellow of Trinity College in 1972 and inspired generations of Trinity natural scientists in his stimulating cell biology supervisions.

He then joined the Laboratory of Molecular Signalling of the Babraham Institute, the life sciences research institution situated six miles outside Cambridge, as deputy chief scientist. He became head of the laboratory in 1994, when he was also appointed honorary professor of cell signalling at the university. On his retirement in 2004 he was appointed the first Emeritus Babraham Fellow.

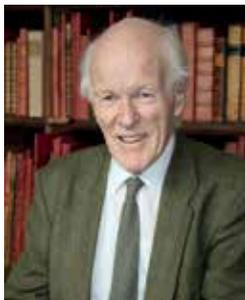
Berridge's breakthrough discovery led to a lifelong interest in the role of calcium in normal and diseased cells and tissues, and he inspired and supported many PhD students, enthusing them with the story of his own research career and endowing an annual prize which recognises research excellence by PhD or postdoctoral scientists.

The importance of his work was recognised with the award of many international prizes. He was elected a Fellow of the Royal Society in 1984, and to the National Academy of Sciences and the American Academy of Arts and Sciences in 1999. He was a founding member of the Academy of Medical Sciences, and in 1998 was knighted by the Queen for "service to science".

Michael Berridge married, in 1965, Susan, née Graham Winter. She survives him with their son and daughter.

Sir Michael Berridge, born October 22 1938, died February 13 2020.

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Professor John Frank Davidson FRS FREng (1926–2019)

Chemical engineer whose childhood obsession with bubbles led to an effervescent career studying their science and beauty.

As a boy John Davidson would fill the bath at his Newcastle upon Tyne home and then pull the plug to observe the vortices, eddies and swirls. Later as a chemical engineer at Cambridge, where for many years he was one of the world's leading authorities on bubbles, his experiments were highly regarded.

He designed and built a rig to hold bubbles stationary in a downward torrent of water – yielding not only important advances in the science, but also a beauty all of its own, with ripples at the base of each bubble and a stationary, almost hyperbolic form above. His pioneering work on fluidisation led to the design of the catalytic cracking reactors that produce much of the world's petrol.

Davidson's algebraic analysis was characterised by elegance and simplicity. While others needed weeks or months of labour to produce opaque computer models, he – with the right simplifying assumptions and a few equations – was frequently able to unlock the understanding of otherwise intractable problems.

This combination of aesthetic, scientific and mathematical elegance bore fruit in his study of fluidised beds – systems widely used in petrochemical and process industries, in which a fluid (usually a gas) is blown through a mass of particles, making them separate slightly so that the mixture of solids and gas begins to behave like a fluid.

Davidson's elegant theory predicted that the gas flowing through bubbles in large fluidised beds would “trap” pockets of gas to move with it in a vortex ring – like the smoke ring from a cigar. This surprising prediction was later shown to be accurate in experiments, first at Harwell and then at Cambridge. The result was of great practical importance because it explained why the amount of contact between gas and solids in large reactors could be much less than that implied by small-scale experiments.

John Frank Davidson was born in Newcastle upon Tyne in 1926 in modest circumstances. His mother, Katie, was a primary school teacher; his father, also

called John, a cashier with the city council, died when his son was nine. After Heaton Grammar School he went up to Trinity College, Cambridge, during the Second World War, and came top of the engineering trips.

It was in the engineering department that he met his future wife, Susanne Ostberg, a lively and ebullient refugee from the Holocaust; they married in 1948 and she died in 2011. Neither was bothered about ideas for their own sake, but about what ideas would practically achieve. Both had considerable strength of opinion and of character. They had a son and a daughter: Peter, a chemical engineer, and Isabel, a senior government lawyer who is married to Sir Oliver Letwin, the former Conservative MP for West Dorset. They had an exceptionally long and happy married life, first at Derby for two years, where Davidson worked at Rolls-Royce on the first commercial jet engines, and then at Cambridge after he won a research fellowship at Trinity College. Money was short during the early decades of their marriage. However, he was a master-handyman about the house and at weekends he was to be found in overalls doing maintenance on the family car. Visiting undergraduates were likely to find that their bikes had been repaired during their stay. In his Who's Who entry he listed "mending domestic artefacts" as his hobby, alongside "upholstery".

Davidson remained a fellow of Trinity College for well over 60 years, serving as steward and vice-master. His tendency to understatement, his delicacy of expression and his puckish humour made him a popular colleague, and he always took a strong interest in the practical aspects of college life.

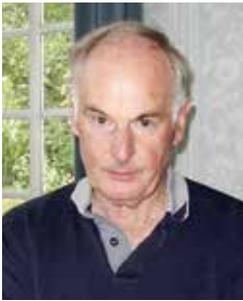
When the fellowship was divided over whether food should be brought into the dining hall via a new route, he adopted the scientific approach. As a result of spending six hours observing the flow of food in three other colleges that had arrangements similar to those proposed, he was able to confirm that there was little or no risk of near misses, let alone collisions, in the relevant passageway. As with his work on fluidisation, this prediction subsequently proved accurate.

As well as being Shell professor of chemical engineering at Cambridge, Davidson was a fellow of the Royal Society, a founder fellow of the Royal Academy of Engineering, president of the Institution of Chemical Engineers, and a foreign member of the Russian Engineering Academy (1998). Among many other accolades, his scientific achievements earned him the royal medal of the Royal Society in 1999.

During a long retirement he continued to do important academic work, cycling (or, once he had reached his nineties, driving himself) to the chemical engineering lab almost every day until his last weeks in hospital.

Professor John Davidson, chemical engineer, was born on February 7, 1926. He died on December 25, 2019, aged 93.

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Dr Roger David Dawe (1934–2020)

Unorthodox scholar whose Oedipus Rex guide was a bestseller and who would rip open his shirt to reveal lines from The Iliad.

The land is ravaged by plague and a popular leader with a complicated family life struggles to protect his people from a crisis he does not fully understand.

Oedipus Rex may seem as relevant to readers today as it did to the Athenians who first saw it in 429BC.

For more than three decades, anyone who studied Sophocles's masterpiece for A level or as an undergraduate was likely to have been guided by the commentary edited in 1982 by Roger Dawe, a fellow of Trinity College, Cambridge. Though far from his most scholarly work – he claimed to have written it in three weeks – this volume in the Cambridge Greek and Latin Classics series was his bestseller, going through a dozen reprints and a new edition in 2006. The book also played a cameo role, to his glee, in an episode of the Channel 4 comedy *Green Wing*.

One of the foremost Greek textual critics, Dawe cast a forensic eye over the medieval manuscripts, anxious to find and correct small errors made by the monks that did not fit his understanding of what was authentic. Most controversially, he argued with force that the final 100 lines of *Oedipus Rex* were a later addition, based on a lack of dramatic quality and a series of linguistic problems. "Everything from this point to the end of the play is spurious," he claimed, "and the voice of Sophocles is heard no more".

This book was, as he said, “a little by-product of more austere researches”, such as the three scholarly editions of the complete works of Sophocles that he produced between 1975 and 1996 for Teubner. One reviewer said it was full of “brilliant insights [that] no serious scholar should do without” but lamented that Dawe had ignored any other academic of the previous half century. This was in character: he disliked most modern literary critics. A colleague described him as a “keen pontifrax”, eager to burn bridges. He hated cruelty to all species, save certain academics.

Yet even those who strongly disagreed with him could find things to praise. Dame Mary Beard said that when she wrote a book on laughter in the ancient world she received generous advice from Dawe, who had edited the *Philogelos*, a Greek joke book. She also remarked that for all their disagreements over the interpretation of Greek drama, he had given her invaluable advice on the crucial matter of who makes the best Christmas puddings.

Roger David Dawe was born in 1934 in Bristol, where his father was a university academic, and educated at Clifton College before going up to Gonville & Caius, Cambridge. There he achieved a starred first and won the Porson Prize for Greek verse composition, an award previously given to Benjamin Hall Kennedy (of Latin Primer fame) and Enoch Powell.

Having acquired at a young age a fellowship at Caius and a 1930s Bentley, he travelled widely in Europe inspecting the manuscripts of the Greek dramatist Aeschylus. He was elected a fellow of Trinity in 1963 and began his research on Sophocles that would earn him a DLitt. In 1993 he published a translation and analysis of *The Odyssey* aimed at the Greekless. An unusually populist work for him, it failed to sell, in part because it ran to 900 pages and cost £50.

He held at times visiting fellowships at Harvard and the universities of Illinois and Colorado. “His work will be respected and consulted by students of Sophocles so long as Sophocles is read in Greek,” a colleague said.

It was on a visit to Vienna that he met his future wife, Kerstin Wallner, a Swedish student and talented artist. They married in 1960 and had two children, Simon, an accountant, and Susie, a nurse. As the family expanded into a house on the outskirts of Cambridge, a child-friendly Volvo replaced his beloved Bentley, though he kept its spare tyres in his garage.

Having resigned as a university lecturer after not being given the senior post that he felt he had been promised, Dawe retreated, Achilles-like, to his tent at Trinity, where he was popular with students for his irreverence and eccentricity. Each new intake would pass on outlandish tales that he never quite denied. Had he really pulled out a starter's pistol in a lecture and threatened to shoot the next person to make a mistake? Or ripped open his shirt to reveal the first few lines of *The Iliad* written on a T-shirt, an act received with more enthusiasm when he did it in America than in Cambridge? And then there was the time he digressed mid-lecture on Sophocles's *Electra* into a discussion of the sinking of the *Bismarck*, drawing the flotillas on the blackboard.

His teaching of Greek verse composition, a dying art requiring the skills of a crossword-solver as much as a wide vocabulary and strong grammar, was patient and kind, despite his tendency to squeal "Yikes" at disastrous efforts. After two years, he would sigh: "Well, I think we are getting somewhere."

He was competitive about how his students performed compared with those at other colleges but less enthusiastic about university standards generally. At a graduation he asked one pupil's nine-year-old sister what she wanted to be when she grew up. "A vet or a hairdresser," she replied. "Well we cater for the former here," he said, then added: "And the way this place is going I'm sure we will soon offer the latter."

Surprisingly fond of low culture, he would pepper supervisions with quotations from *Carry On* and James Bond films ("That's a Smith & Wesson and you've had your six," he would say to someone making persistent errors.) He also loved Gilbert & Sullivan and Mozart's *Don Giovanni*, as well as tennis.

After his wife died in 1999, he reduced his tuition but took pleasure in teaching English to immigrant members of the college staff. In 2018, he moved to live with his daughter near Cognac, where he wound down his life by indulging his love of old sitcoms, especially *Dad's Army*. To die in Cognac, he might have remarked in years past, should be every Cambridge fellow's ambition.

Roger Dawe, classical scholar, was born on September 15, 1934. He died of pneumonia on February 16, 2020, aged 85

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Chris Harris



Professor Freeman Dyson (1923–2020)

Cambridge-educated theoretical physicist and author reckoned to have one of the most original minds of the 20th century.

One talent Freeman Dyson possessed in abundance was dreaming. In the 1950s he imagined cruising around the solar system “exploring the planets and moons, just as Charles Darwin cruised with the good ship *Beagle* around the Earth exploring the continents and islands”. His “fuel” for propulsion? Two thousand nuclear bombs.

“The basic idea is absurdly simple,” he said. “One is amazed that nobody thought of it before.”

This was no mere fantasy. It was part of the Orion project, funded by US taxpayers through the Department of Defence. Dyson worked on the project for six years before it was killed off by the 1963 Partial Nuclear Test Ban Treaty, banning the use of nuclear weapons in space.

His was one of the most brilliant and original minds of the 20th century. To call him a theoretical physicist and mathematician hardly begins to describe him. But, British-born, he died largely unrecognised by this country beyond a fellowship of the Royal Society conferred when he was 28. He was said to be the best physicist never to receive a Nobel prize, and arguably should have shared the 1965 physics prize with Richard Feynman, Julian Schwinger and Sin-Itiro Tomonaga.

They won it for their work in quantum electrodynamics, Dyson’s prime discipline. On a Greyhound bus ride in 1949 Dyson realised that the rival formulations of quantum electrodynamics, one by Feynman and the other by Schwinger and Tomonaga, were identical and could be synthesised.

“I think it’s almost true without exception if you want to win a Nobel prize,” Dyson said, “you should have a long attention span, get hold of some deep and important problem and stay with it for ten years. That wasn’t my style.”

His style developed to introduce a powerful moral dimension in books about nuclear fission, space travel and the prospects of encountering civilisations in other parts of the universe. Aside from solid-state physics, nuclear engineering

and the search for extraterrestrial intelligence, he proposed using mirrors to improve ground-based telescopes.

Short, thin and humorous, Dyson could seem like a character who had walked straight out of the pages of a Tolkien novel and there was about him an air of moral superiority. In the 1960s, having become a US citizen, he changed his mind about atomic testing. He had been in favour of it until, to his horror, he saw the number of atomic explosions increasing exponentially.

Dyson questioned conventional wisdom about climate change, arguing that climatologists were unable to calculate how much global warming is caused by human activity and how much is due to natural variability. Even more controversially, he believed that global warming could make the Sahara desert wet enough to bloom.

In a 2009 profile of Dyson in *The New York Times Magazine*, his colleague Steven Weinberg, a Nobel laureate, said: “I have the sense that when consensus is forming like ice hardening on a lake, he will do his best to chip at the ice.”

Dyson had strong theories about combatting overcrowding on Earth. His hypothetical Dyson Spheres were artificial planets that could orbit the sun, creating habitats with inexhaustible sunlight energy. Dyson Trees were artificial plants that could create a breathable atmosphere on comets.

Freeman John Dyson was born in 1923 in Crowthorne, Berkshire. His father was Sir George Dyson, a musician, composer and conductor who became director of the Royal College of Music, and his mother, Mildred Lucy (née Atkey) was a lawyer who became a social worker.

Shortly after Freeman was born, his father was appointed master of music at Winchester College in Hampshire. Freeman spent his early years there, attending a day school and then boarding at Twyford College near by.

The top scholar in his Winchester intake, and excelling at mathematics, at 14 he taught himself Russian to read an introduction to the theory of numbers by Ivan Matveevich Vinogradov. A year later he taught himself calculus.

“Things were really black at that time,” Dyson said. “My childhood was dominated by this disaster of the First World War and we saw the Second World War coming, and it was almost certainly going to be worse. And of course there was this economic depression and England was tremendously polluted. Every

evening, my shirt collar was black.” He escaped school bullies by immersing himself in science fiction by HG Wells, Jules Verne and Olaf Stapledon, who gave him the idea for Dyson Spheres. In 1941, Dyson was awarded a scholarship to Trinity College, Cambridge.

Called up in 1943, with considerable pacifist misgivings he became an RAF Bomber Command analyst, calculating ways to improve mission efficiency. He proved that experienced bomber crews had no better chance of surviving than inexperienced ones, and having tail gunners merely increased casualties. But as his analyses led to bombers destroying whole cities, he wondered “how it happened that I let myself become involved in this crazy game of murder”. Dyson suffered terrible guilt. “After the war, I read of the trials of men who had sat in their offices calculating how to murder people efficiently, just like me,” he said. “The main difference was that they were sent to jail or hanged as war criminals, and I went free.”

He graduated in theoretical mathematics from Cambridge in 1945 and promptly became a fellow of Trinity. In 1947, he moved to America on a fellowship to Cornell University, moving back to Britain to Birmingham University two years later. In 1951, despite his lack of a PhD, he was appointed a professor of physics at Cornell, then in 1953 he became a professor at the institute for advanced study at Princeton.

In 1950 Dyson married Verena Huber, a Swiss mathematician he met at the institute for advanced study. When she left him for another man in 1958 he married their au pair, Imme Jung. The first marriage produced two children: George, a scientific historian, and Esther, an investor involved in Wellville, a non-profit health project. Dyson and Imme had four daughters. Dorothy is a veterinary surgeon; Mia, a nurse and chaplain, breeds labradors; Emily is a cardiologist and Rebecca is a radiologist. Verena died in 2016. He is survived by Imme, the six children and 16 grandchildren.

“We had a very normal family life,” said Esther who, like George, remained with Dyson after the divorce. “Dad was always home for dinner. In the winter he would take our sledge to work at Princeton and we would come and pick it up after school and go sledding or ice skating with him.”

He sometimes found practicalities challenging, like operating a drinks vending machine. “You could tell that the world was a beautiful place through his eyes,” Mia said. “Understanding all the formulas and the natural laws and all the

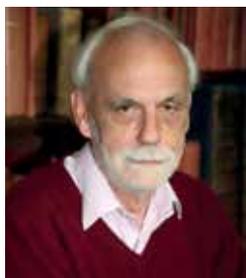
mysteries he had plumbed through the study of physics, it only grew more and more beautiful, the more he understood.”

Dyson was a prolific author. He published many articles in scientific journals and many books including *Disturbing the Universe* (1979), *Origins of Life* (1985), and *A Many-Coloured Glass: Reflections on the Place of Life in the Universe* (2007).

“In some ways,” Dyson said, “my lifetime has been amazingly quiet and stable. My mother lived through much bigger changes. She started her life riding around in a pony cart and finished up flying in jet planes. I haven’t had any changes as big as that.”

Freeman Dyson, physicist, was born on December 15, 1923. He died after a fall on February 28, 2020 aged 96

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Dr Ian Ranald McDonald (1938 – 2020)

Ian McDonald passed away peacefully in his Suffolk home on July 19th 2020. Although proud of his Scottish heritage, Ian was born in Southampton on April 16th 1938, after his parents moved south to England. His father died shortly after his birth. Ian attended Prior Park Public School in Bath. Later he earned a Physics Degree at the University of Hull; thereafter he engaged in experimental work towards a PhD at the University of Bangor in Wales, but eventually switched to theoretical research on nuclear magnetic resonance at the University of Nottingham. He then moved to Royal Holloway College near London as a postdoctoral research associate with Konrad Singer, after which he accepted a faculty position at Trinity College Dublin.

In 1967 Ian returned to Konrad Singer’s group at Royal Holloway College (RHC). Together they pioneered Statistical Mechanics simulations in the UK. Specifically, they produced an early paper on histogram re-weighting (see: “Calculation of Thermodynamic Properties of Liquid Argon from Lennard-Jones Parameters by a Monte Carlo Method”, *Discussions of the Faraday Society* 43, 40–49 (1967)).

In a historic 1969 paper Ian was the first to introduce constant pressure Monte Carlo simulations (NPT Ensemble), which he extended in 1972 to mixtures. The same year Konrad and Ian organized a successful simulation workshop at RHC, attended, among others, by Loup Verlet, Daan Frenkel and Jean-Pierre Hansen. Another important work from that period, was produced by Ian, Konrad, and Evelyne Gosling. They pioneered non-equilibrium molecular dynamics (MD) at the same time as Bill Hoover in the USA (see: *Molecular Physics* 26, 1475, (1973)).

In 1973–74, Ian spent a year in Paris, where he worked in close contact with members of the Verlet group and researchers at CECAM in Orsay. This led to the start of strong interactions with life-long friends and collaborators, including Giovanni Ciccotti, Jean-Pierre Hansen, Gianni Jacucci and Mike Klein. In 1973, Ian was invited by Academic Press to write a book on the liquid state. He convinced Jean-Pierre Hansen to be co-author of the book, which was completed in 18 months and published in 1976. This first highly successful edition was followed by three thoroughly up-dated editions in 1990, 2006 and 2013.

In 1977 Josette Dupuy (ILL Grenoble) and AJ Dianoux organized the NATO Advanced Study Institute on Microscopic Structure and Dynamics of Liquids in Aleria (Corsica). This was one of the first Summer Schools devoted to liquids, and was attended by many distinguished colleagues, including Pierre-Gilles de Gennes, who gave the concluding address. Ian gave the introductory series of lectures on MD, which were highly appreciated. In 1978 Ian joined forces with Giovanni Ciccotti and Gianni Jacucci to introduce the concept of “Thought Experiments” by MD. This paper is considered a classic in the field.

In 1979 Ian was called to Cambridge, where he was appointed Teaching Fellow at Trinity College and Lecturer in Physical Chemistry at the Department of Chemistry. On moving to Cambridge, Ian engaged in fruitful collaborations with Ruth Lynden-Bell and other members of the thriving Department, including Stephen Elliott, while maintaining close links with colleagues from outside Cambridge, including Mauro Ferrario, Daan Frenkel, Jean-Pierre Hansen, Mike Klein, Paul Madden, Jean-Paul Ryckaert, Ilja Siepmann and their collaborators.

Over the years, Ian’s interests broadened to ever more complex molecular, ionic and metallic states of matter, as well as to dense plasmas. In 1987, he joined forces with Giovanni Ciccotti and Daan Frenkel to publish “Simulations of Liquids and Solids”, a collection of 49 key papers, from Metropolis et al. (1953) to Car and Parrinello (1985), accompanied by enlightening comments.

Ian did not shy away from administrative duties. From 1979 to 1985, and again from 1992 to 1994, Ian was the Editor of *Molecular Physics*. In his rigorous and demanding style, Ian did not hesitate to suggest improvements of presentation and language to authors of manuscripts, after they had been already accepted by referees. Ian demanded clarity and rigour of scientific presentations, and many of his collaborators owe him a large debt of gratitude for honing their scientific writing ability. Importantly, from 1994 to 2002, Ian served as Admissions Tutor at Trinity College Cambridge, a crucial and time-consuming job.

After his move to Cambridge, Ian acquired a small house in Huntingfield, a village near Halesworth in East Suffolk, close to the North Sea. This home he shared with his life partner Susan O’Gorman, his muse on all things mathematical. Later, Ian and Susan moved to “The Wicket”, their splendid 16th century cottage near Fressingfield in Suffolk. Working during weekdays in different places, Ian in Cambridge and Susan in Ipswich, they spent their weekends together in this idyllic cottage. They were warm and gracious hosts when Ian, quite often, invited a scientific visitor to join them and spend a relaxing period in the Suffolk countryside.

In December 2013, Ian and Susan attended a three-day meeting in Rome on the occasion of Giovanni Ciccotti’s 70th birthday. After the meeting they stayed on to visit Rome. On Piazza Navona, Ian suffered a severe heart attack and was transferred urgently to the Royal Papworth Hospital near Cambridge, where he underwent massive heart surgery. It took him months to recover, but eventually he pulled through and resumed almost normal life. Sadly, Susan passed away on May 14th 2019, after a long fight with cancer. This was a terrible blow to Ian, from which he never recovered despite much attention from family, friends and colleagues.

Ian was a very private, self-effacing person. He supervised a small number of PhD students, including Ali Alavi and Ilja Siepmann. Notably, Ian did much of the computer programming for his research. Above all, he was a very rigorous scientist, and a loyal friend to many. Ian was very fond of nature and gardening, as was evident from the meticulous care he devoted to his gardens. Our community will sorely miss him. He was buried at the Church of St. Peter and St. Paul, in Fressingfield, Suffolk on August 10th 2020.

Acknowledgements: we are grateful to John Roberts, Malcolm and Diana Annis, and George Jackson for providing us with pertinent information.



Eightieth Birthday speech

31 August 2020

Alan Weeds (1975)

Master, Fellows and Guests. May I first thank you, Master, for your kind introduction and proposing my health as I enter my ninth decade.

Our former Fellow, Bob Robson, used to say that “no good turn goes unpunished”. Thus it was not with unalloyed pleasure that I received the Vice-Master’s invitation, knowing that I would have to sing for my supper, a song subsequently to be published in the *Annual Record*. Having read many speeches from Fellows far more distinguished than myself, my only regret is that we have to wait until their eightieth birthdays before learning about their formative years and life experiences. Should not these insights be given at a much earlier age, to allow us to learn from their wisdom and perhaps be more understanding of their foibles? Unfortunately for you, my own story is less inspiring than many of these.

I was born in Cambridge in December 1939. Paraphrasing King George III, “born and bred in this City I glory in the name of Cambridge”. My father was born in Great Yarmouth in 1905. His life as a boy was not easy: his mother died when he was six, and he was brought up by his aunt, who in 1914 married her brother-in-law. Sadly, his father died only a year later, and in 1916 his elder brother by fourteen years was called up as a dispatch rider in the horse artillery. Too old for active service in WWII, Father served as an Air Raid Precautions warden. His career was with the Post Office: he moved to Cambridge in the 1930s, later to have executive responsibilities for personnel in the Telephone Managers Office (now BT). Sadly, he died of a heart attack at the age of 63, just when I, as a young parent, was beginning to realise just how hard it must have been for our parents who had lived through both great Wars.

Mother was the second daughter of six children. She attained a scholarship to the High School in Great Yarmouth and, although both her father and the school were keen for her to go to college, she felt that, with others of her sisters already working and the family not well off, her duty was to do the same. As a result, both parents were committed to giving my sister and me the best education available in Cambridge.

I entered the Perse School in 1950 with a direct grant scholarship. Like all my contemporaries, I greatly admired both first-form teachers, but the teacher who made the greatest impression on us all was Douglas Brown. An old Persean himself, Douglas had served as a medical orderly in India, before entering St Catharine's College, where he was awarded a double starred First in English under his mentor, F. R. Leavis.

English education at the Perse was very unusual. We were brought up in what was called the "Mummery tradition". In the first two years, there were six lessons per week: two periods of drama acting, one of mime and another called "explorations", which involved giving 3–4 minute speeches on everyday subjects, like boiling a kettle. During the single period when we studied syntax and grammar (called "chores" by Douglas), we also prepared a longish essay (something sadly missing in school education these days) and wrote a poem on the Arthurian legend. For the last period on Saturday mornings Douglas read to us from the *Beowulf* saga and later from Sophocles' *Philoctetes*, both of which we remodelled into plays, to be performed in front of dutiful parents. To eleven-year olds this was too much fun to count as schoolwork, but it provided a strong grounding to our imaginative lives and expressive confidence. In the sixth form we philistine scientists had two lessons a week from Douglas, studying *inter alia* Sophocles' *Oedipus Rex*, Shakespeare's *Hamlet* and Conrad's *Typhoon*. In addition, Douglas gave regular musical evenings at his home, which I attended even after leaving school. Astonishingly, he found time to supervise undergraduates at his old College, acted as Director of Studies in English at Corpus and lectured on Conrad for the English Faculty, though not all at the same time! Sadly, he died of cancer at the age of 43, just before he due to take up the first Professorship in English (and Music) at York University. A truly remarkable and inspiring man.

My academic interests gravitated towards the physical sciences, and I took Chemistry, Physics and Maths for A Level. It is worth noting how different exam marking was in those days. I spent a couple of summers working for the Cambridge Examination Syndicate, drawing histograms showing the numbers of candidates with each mark at O Level. The pass mark was calculated from the median: fifty percent were destined to fail!

In the expectation of compulsory military service, the Perse had an Officer Training Corps, where after a year in the army section I joined the RAF section and eventually became Flight Sergeant. My most exciting memory is of flying from Marshall's to Kent at 800 feet over Central London, necessitated by very



Caius undergraduate.

low cloud. We flew in a Harvard Trainer – planes used during the War to help transition pilots from Tiger Moths to Spitfires.

I have always been grateful to the Perse for my education and was able to give something back when in 1985 Trinity appointed me its Governor. Only when I retired in 2012 did I realise I had been a Governor for 27 years, many as Vice-Chairman. I was the “Mr Chips” of the Board, valued for my institutional

knowledge which spanned 60 years. I had always hoped that we would combine with our sister Perse School, but after over ten years of discussions, in three separate committees, it became clear that this would not happen. Following our decision in 2004, the School was fully co-educational by 2012. Last summer, the Perse was ranked first in the Country for A Level results in co-educational schools, though a number of single-sex schools outranked it, with the best school being Guildford High School, where my wife was educated. She assures me that it was nowhere near as good in the 1950s!

My parents strongly encouraged and supported my musical interests. My grandmother also lived in Cambridge and was a devout Christian, so I was encouraged to become a chorister at our local church, St. John's in Hills Road, which was John Bradfield's parish church. As a result, I know many Anglican hymns by heart. I took up piano playing at the age of six, which continued until I went to university, taking examinations to diploma level. Music became and remains my greatest interest, joy and comfort and, for me, opera is the zenith of all musical endeavour. Although the plots are often absurd, opera combines fine orchestral and vocal music with the visual beauty of choreography, costumes and sets. Over the past 18 years Antonio Pappano, the Musical Director at the Royal Opera House, has never failed to get more out of the orchestra and singers than any visiting conductor. His interpretations have been utterly sublime – I think of the Prelude to Act 1 of Wagner's *Lohengrin*; for nearly three minutes we hear only the quiet and high-pitched vibrato of the violins playing the 'Grail' motif, later joined by woodwind, then rich harmonies with brass and percussion, so typical of Wagner's genius. Soon the grandeur subsides leaving only a gossamer web of shimmering sound from those violins, which too die away as notes climb to the top of their register. Even after 70 years, this passage was described as the earliest and most perfect example of the effect of celestial harmony produced on the high notes of a divided violin choir.

In 1956 it was announced that those born after 30 September 1939 would no longer be required to do military service. Because of National Service, university places were generally awarded two years in advance, this led to extreme competition for places in 1958. Although I applied to Oxford, I was fortunately rejected: had I gone there, I would never have done my PhD at the Laboratory of Molecular Biology (LMB) – the mecca of Molecular Biology. I failed to get an open scholarship to Caius for 1958, but was offered a place for 1959. This provided the opportunity to gain experience in research chemistry at Aero Research Ltd in

Duxford. The company had been set up in 1931 by Norman De Bruyne (later Sir Norman, FRS), a Trinity graduate, who became a Fellow in 1928 and served as Junior Bursar. A close friend of John Bradfield, it was he who, in 1927, climbed the front of the Great Gate and placed the furniture leg in Henry VIII's right hand.

I joined a newly formed specialist group developing a new hardener for their epoxy resin (known commonly as Araldite). The existing catalysts contained triethylene tetramine, which stank of mice and caused dermatitis: these properties were overcome by suitable chemical modification. I also worked on a number of specific problems. 1959 was a very hot summer and we needed an epoxy coating to line the tanks inside a ship at Portsmouth. In the early mornings, when the tanks were at sea temperature, the resin was applied with a trowel, but as the day progressed and the tanks warmed up, it dripped from the ceilings and ran down the walls – very unpleasant for those doing the job. I was excited to be given the task of finding an additive that would inhibit the viscosity drop. The fifteen months I worked at Duxford were particularly enjoyable ones because of the experience gained in a wide range of organic syntheses, as a result of which I decided to major in organic Chemistry. These years also convinced me of the value of taking a gap year between school and university.

In the 1950s Cambridge was a small market garden town with medieval infrastructure, a distinguished University and only two major private sector employers – Marshall's Airport and Pye Unicam, makers of scientific instruments. On bonfire nights the town centre was a very different place. Over the University's 800-year history there were frequently riots and atrocities between Town and Gown, and these confrontations continued into my first year. I saw the full impact of this in my first year, having a room on the fourth floor of St Michael Court overlooking the Market Square. The Square was thronged with crowds of young people lighting fireworks, some dangerous because they were home-made. Although special constables surrounded the Square, activities there were left well alone. What started as a disorganised display transformed into a riot. Recently reading my diary for that evening, I noted that police helmets were stolen, lamps climbed, signs ripped up, Belisha beacons and bus windows broken and a wooden hut in the centre of the Square torched. Fireman extinguished the blaze and finally dispersed the crowds with their hoses. To prevent this ever happening again all University students, easily identified by the obligation to wear gowns at nights, were banned from the Market Square on bonfire nights.

In 1956 Mervyn Stockwood was appointed Vicar of Great St Marys (GSM), our principal Trinity living. He was a socialist, very controversial and a fierce critic of the Government over Suez. I became a member of GSM in 1957. Mervyn once described himself as a “Christian agnostic”, a term which I am happy to use of myself. With most undergraduates coming up after National Service, college chapels were well attended and students regularly filled GSM to capacity, including both galleries, for Mervyn’s sermons and those of distinguished visitors of faith and no faith. This was the beginning of what became known as the “Cambridge Phenomenon”. It was a time of deep questioning in the Christian faith: John Robinson, Bishop of Woolwich and later Dean of Trinity, shocked the world with his *Honest to God*. A series of lectures was published entitled *Objections to Christian Belief*, not to give answers to such objections, but in the words of Dr Alec Vidler, Dean of King’s, “to plumb the objections without complacently assuming that answers were readily available”. “Above all”, Vidler wrote, “Christians in a University must seek to understand the fundamental doubts to which their faith is exposed”. I suspect this is even more true today, but it seems to be a topic that is sadly neglected.

My route to Part II Biochemistry was via Chemistry, Physics, Mineralogy and Crystallography and Maths. It was an exciting time to do Biochemistry: the focus of the subject was racing from what I might call the metabolic age to the structural and informational age. Protein and enzyme structure and function particularly fascinated me, and I decided to do my PhD in Fred Sanger’s Protein Chemistry Division at the newly opened LMB. Disappointed not to get a first, I was astonished to be elected to one of only five College Research Studentships. (I learned only recently from a nonagenarian Fellow at Caius that these awards were made *ad hominem* by the Council, based not only on Tripos results, but also reports from College and the accepting Laboratory.) I feel very honoured to have been awarded one.

In May 1960 I met Stella, an NST Natural Scientist at Newnham. Suffice it to say that we soon fell in love and married just after graduation in 1962. Nicolas born in 1966 and Helen in 1969. Without Stella’s unstinting support as wife and particularly as devoted mother, I could never have achieved what I have. Oscar Wilde wrote: “children begin by loving their parents; after a time they judge them; rarely, if ever, do they forgive them”. With their presence here tonight, I hope that they do not judge me too harshly. I love them dearly: both have totally outshone Stella and me as students. Both won University prizes at

Oxford, Nicolas in Physics and Helen in PPE; both came to Cambridge, Nicolas to do Part III Maths in Trinity, where he won the Mayhew Prize, awarded to the student showing the greatest distinction in Applied Mathematics – not bad for an Oxford physicist! He set almost impossible standards for sister Helen, but she matched his standards by coming top in Economics in her final year, and was awarded the first America's Scholarship at Merton for her Master's degree, part of which was supervised by the late Sir James Mirlees. After her D Phil, she came to Fitzwilliam as a Research Fellow. No parent could have been more proud, so tonight, I want above all to express my gratitude and enormous admiration to Stella, Nicolas and Helen.

Addenbrooke's Hospital began its move to the current site in 1962 with a two-storey building, now the entrance to Outpatients, and opposite was the four-storey Laboratory of Molecular Biology (LMB). All around were fields as far as the eye could see. Today Addenbrooke's is the largest biomedical centre in Europe with over 20,000 working there.

Within a month of my starting as a research student in September 1962, Nobel prizes were announced for Watson and Crick for their work on DNA structure and Perutz and Kendrew for establishing the three-dimensional structures of haemoglobin and myoglobin. Suddenly the LMB was headline news and for several decades thereafter it was the leading molecular biology laboratory in the world.

It is impossible adequately to describe the frenzied activity, excitement and commitment of working there at that time. With little automated equipment, progress was best made by returning to the lab late into the evenings and at weekends. The Protein Chemistry Division was characterised by the smell of organic solvents including pyridine and toluene used for paper electrophoresis, a technique greatly valued by Sanger. Radioactive labels were widely used with hundreds of samples counted at night-time, the flashing lights on the scintillation counters were mesmerising. Elsewhere amino acid analysis machines worked day and night making for very long days and, in the absence of electronic calculators, all numeric analysis was done with manual adding machines.

I owe a great debt of gratitude to my supervisor Brian Hartley, who I am pleased is with us tonight. Brian was exceptional in giving me complete freedom to choose my own research projects. He encouraged me in my curiosity to work on myosin, the essential motor protein of muscle contraction, even though



A Victorian pose.

it was unrelated to his own research on chymotrypsin. His enthusiasm was infectious and when, as so often happened, I seemed to have achieved nothing, meetings with him were always uplifting and I came away excited to do the next experiments. I can picture him now squatting on a wooden stool in his office, unlit pipe in mouth, with a finger constantly tamping down the burnt tobacco, much of which ended on the front of his sweaters.

Most of my research career has been focused on the two major proteins of muscle contraction, myosin and actin. It may help to have a brief background. What perplexed me about myosin was that rabbits from Boston appeared to differ in their subunit structure from rabbits from Baltimore. Hydrodynamic studies in Boston suggested two major subunits, while those in Baltimore suggested three. Repeating these experiments, I concluded that the methods could not resolve the issue so turned instead to protein chemical methods. The second most rare amino acid in myosin is cysteine, which contains sulphur which can be radioactively labelled. I developed a method to label the cysteine residues and attempted to isolate and sequence all the cysteine peptides. If myosin contained only two identical chains, there should be 24 different sequences while the three-chain model predicted 16. After nearly two years work, I had sequenced 22 unique peptides which confirmed that myosin was made up of two large polypeptides. On the basis of this work, I was awarded a Research Fellowship at Caius.

Very soon after the work was completed, Prof. Susan Lowey at Harvard Medical School used electron microscopy to show that myosin is made up of two globular heads and a long tail. I spent a very fruitful postdoctoral year in 1967–8 working with Professor Lowey. Because proteins are frequently made up of functional domains linked by flexible regions, these regions are particularly susceptible to limited cleavage by proteolytic enzymes. Using the plant protease papain, Professor Lowey was able to separate the two globular heads, termed sub-fragment 1 (S-1) from the 1.35nm helical tail and we spent the year characterising the properties of S-1.

When I returned to Cambridge in 1968 Hugh Huxley invited me to set up a muscle biochemistry group in his Structural Studies Division. At this time a new technique (termed SDS polyacrylamide gel electrophoresis) had been developed to denature proteins and separate their various subunits. Using this method I showed that, in addition to the two heavy chains previously identified,

myosin contains two pairs of light chains (each about a tenth of the mass of the heavy chains), only one class of which is essential for ATPase activity (ATP hydrolysis provides the energy for muscle contraction). We characterised these light chains, determined their amino acid sequences and explored their role in ATPase activity. In subsequent years we showed that myosins isolated from different types of muscle (fast, slow and cardiac) differ in their light chains. (Muscles used for short bursts of activity, e.g. by a sprinter, are “fast”, whereas those used for long-term sustained activity like maintaining posture are “slow”). This led to a collaboration with Professor Arthur Buller at Bristol University who wanted to find out the extent to which the frequency of nerve stimulus controlled the physiological properties of muscle. Buller had cross-reinnervated two muscles, i.e. connected a nerve normally stimulating a “fast” muscle to a “slow muscle” and vice versa and had shown that the properties of the cross-reinnervated muscles reciprocally changed. This provided clear evidence that the physiological properties are specified by the frequency of stimulus of the innovating nerve. In collaboration with David Trentham, a long-term colleague at the Molecular Enzymology Department in Bristol, where I held a visiting lectureship for ten years, we confirmed that both the ATPase activities of the myosins and their light chain compositions had reciprocally changed: i.e. myosin gene expression and indeed the whole metabolic system in muscles is controlled by the frequency of nerve stimulus.

In the summer of 1969, the year of the moon landing, I spent a sabbatical at Dartmouth College in New Hampshire. It was the bicentennial anniversary of the founding of the College by King George III to educate “North American Indians in Christian theology and the English way of life” and there were many concerts and other cultural activities to celebrate the occasion. Other than this brief sabbatical and a year at Stanford Medical School in 1980, I worked at the LMB until retirement in 2005, living within three minutes by bicycle. When in 1975 Brian Hartley became Professor of Biotechnology at Imperial College, I was appointed to succeed him as teaching fellow in biochemistry. 1975 also marked a change in the focus of my research. Although I continued studies on myosin until 1980, I started to work on intracellular actin, which is an essential protein for many forms of motile activity including cell locomotion, nerve cell growth, blood clotting and phagocytosis. Fundamental to all these processes is the reorganisation of the actin cytoskeleton, whereby actin filaments are assembled at the protruding frontal edge of cells using monomeric actin

released by depolymerization of filaments elsewhere in the cell. We set out to find proteins that might be responsible for this recycling, working initially with blood platelets. In 1979 we discovered an actin depolymerizing protein in blood plasma, which we named plasma gelsolin.

In 1988 a significant breakthrough was made by my Trinity research student, Michael Way, who cloned gelsolin and determined its genetic sequence. This revealed a six-fold structural repeat. By expressing various combinations of these repeats in bacteria, we identified and characterised three distinct actin binding sites and showed how in different combinations these three sites promoted either filament disassembly or its assembly. Although attempts to crystallize intact gelsolin proved unsuccessful, we were able to crystallize the high affinity actin-binding domain in complex with actin to map the interaction site. This work showed how gelsolin controls filament assembly and disassembly, but left open the question why gelsolin, also an important intracellular protein, should be present in blood. The most likely reason is that it acts as a scavenger to depolymerize actin released by various kinds of blood cells, including damaged leukocytes and lymphocytes, and red blood cells that are damaged by the considerable stresses that occur as they circulate through the bloodstream. In the absence of this protein, actin released from these cells would greatly increase the viscosity of blood, imposing additional strain on the heart.

A year after we discovered plasma gelsolin, together with Jim Bamburg, a professorial visitor from Colorado, I identified an unrelated and much smaller actin depolymerizing factor (ADF) in chick embryonic brain and much of my research career thereafter was spent studying this protein and its near relative cofilin, discovered somewhat later in Japan. My last Trinity student, Sharon Yeoh, made a detailed comparison of the effects of these two proteins on both actin filament assembly and its disassembly. Attempts to crystallize ADF having failed, in 2004 in collaboration with Linda Ball in Berlin we published the three-dimensional structure of cofilin using nuclear magnetic resonance and identified residues involved in actin interaction. Evidence from many labs showed that ADF and cofilin are essential for remodelling the cytoskeleton in animal cells. Our own work on localization and function was carried out in collaboration with Patrick Hussey at Royal Holloway studying root development in germinating maize seedlings. ADF is distributed throughout the cytoplasm in early stages of root hair development, but as the hair emerges actin filament bundles form at the growing edge and ADF concentrates at the tips of the hairs and remain

there as elongation proceeds. Disruption of the filament bundles destroys these structures which suggests that ADF functions in both assembly and disassembly processes. Later work with the Royal Holloway group focused on the regulation of these different activities. I cannot leave my science without acknowledging my gratitude to Brian Pope, my principal research assistant for over 30 years who ran the laboratory. Brian came to the LMB without a university degree but in later years was first author on many papers: utterly reliable, rigorous and innovative, he was an excellent role model and mentor for younger members of the group and deserves great credit for the success of much of my work.

Groups at the LMB were then much smaller than they are now – mine was never larger than six. It was Max Perutz’s dictum that all experimental scientists should do experiments with their own hands, and even in my sixties I greatly enjoyed spending long days in the lab doing fluorescence kinetic measurements on protein-protein interactions. This is the real joy of science – not administration as happens so much these days. Looking back on 43 years at the LMB, I realise just how fortunate and privileged I have been. Few could claim to have worked alongside, or in the shadow of, at least twelve Nobel prize winners, most of whom I knew well. Some, like Sanger and Perutz, were outstandingly original experimentalists, others like Crick and Klug, incisive, critical and creative theorists but there were two, Brenner and Andrew Huxley, who combined both enormous breadth of knowledge with razor-sharp minds and the capacity to do really pioneering experiments.

I was first a Fellowship Elector at Trinity in 1976 with Greg Winter as my candidate. Only three Fellows were elected that year, fewer than in earlier or later years. We had a very distinguished group of Electors including Jack Gallagher, Alan Hodgkin, Ian Cassels, John Davidson, John Polkinghorne and Sir James Lighthill. As Greg has often told us, perhaps as an encouragement to our younger students, he got only a 2.2 in his Part II course. None of the Electors seemed to think that someone with such a poor degree could possibly have the potential to become a Trinity Research Fellow. I remember having stoutly to defend his application under heavy questioning. None present could have predicted that Greg would become not only a fine Master of the College but a Nobel laureate. Brian Hartley was Greg’s supervisor, which gives him the great satisfaction of being “Father” of a Nobel laureate. In 1977 I was privileged to be Elector for another of Brian’s really outstanding students, Michael Neuberger, also nominated for a Nobel, but who tragically died in 2013. It was a real pleasure

to teach our Parts II and III biological scientists with Michael. Not only did these sessions show his enormous range of knowledge and sensitive but penetrating questions: it also revealed his essential humanity.

I had planned to retire from teaching after 25 years at the age of 60, but found increasingly that I got greater satisfaction from my students than from publishing more papers. From 2000 to 2004 I much enjoyed being Director of Studies for over 80 students at the LMB and was involved in setting up a mass spectrometry facility. In 1997 the MRC invited me to become a Trustee of the Pension Fund, which I did until retirement in 2005, then remained on the Investment Subcommittee for a further nine years. Half the trustees were nominated by Council and the other half elected by employees. None was paid, except (very modestly) our chairmen. The two chairmen who served with great distinction during my time were Sir David Hancock, Treasury mandarin and later Permanent Secretary at the Department of Education, and Charles Perrin, Chief Executive and later Deputy Chairman of Hambros bank. My principal contribution as a Trinity man was to persuade the Trustees to invest up to 25% of the assets in property, an asset not normally favoured by pension funds. The scheme remains a fully funded, index-linked career average defined benefit scheme with contributions of 15% of salary from the MRC and 6% from employees – very much lower than those in the USS.

A couple of small vignettes from times past. In the late 1980s we were concerned about the relatively poor Tripos results in Natural Sciences. I remember being flown by Alan Windle in his private plane to Le Touquet for lunch, after which we walked along the beach discussing the problem. We agreed to introduce short exams equivalent to Oxford Colleges' Collections for our first-year students – to be taken at the beginning of Lent Term. These exams became very popular with the students because they increased their self-confidence. I am also proud to have set up the seminar programme for Graduate Biologists which has continued for nearly 25 years. I was extremely grateful in 2000 when Council agreed to allow the students to have a Fellows' dinner after each seminar. These dinners allowed students from all over the University and the many outlying research institutes an opportunity for social and scientific discussion.

I have often said that Trinity has three great advantages: the grandest post-medieval buildings in Cambridge, being the richest private education establishment in the Country and, because about one third of the Fellows are retired, the finest old

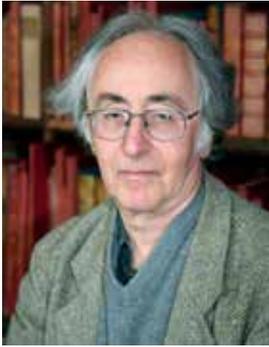
people's home. Above everything else, it is the constant renewal of our junior members who make the College. Reflecting on over forty years of teaching biochemistry and molecular biology to students from first-year medicine to PhD level and beyond, I realise how much energy and pleasure teaching gave me. What a privilege!

Before ending I would like to express my gratitude not only to all our Catering staff for this excellent meal tonight, but also to the legion of College staff in many departments whose service, courtesy and friendship over many years I have greatly appreciated.

Thank you for listening.



James Appleton



Eightieth Birthday speech 8 February 2020

Brian Josephson (1969)

Thank you, Master, for your kind words. First of all I should like to thank both the College as such, and the individual members whom I have come to know and be friendly with over the years, for all their support. And I must also thank my wife Carol, to whom I have been married for 44 of those years. It can be difficult being married to an academic, because of the importance academics rightly attach to their research, and the fact that research is not a 9 to 5 job, and in many cases continues after retirement.

There are very many things that I should ideally like to talk about, but it would take some hours to cover all of them, so I need to be selective. I will talk first of all about the changes that have occurred over my lifetime. One of these is the very fact that there are women in this gathering, which would not have been allowed when I became a Fellow. There was one exception to the rule, however: when Professor J. E. Littlewood became 80, his long-time collaborator Mary Cartwright was defined as an honorary man, and so allowed to be present at the celebration. One Fellow, when the possibility of allowing women as guests in hall was being discussed, made a memorable comment to the effect that he would prefer Hall to be as free of women as a well-conducted gentlemen's lavatory. And, at a College meeting that discussed the possibility of women Fellows, it was said by a Fellow present that deceased Fellows would be turning in their graves at the prospect. But now of course we have, for the first time, a woman Master of Trinity.

Before leaving this subject, I will just mention one aspect where I played a small part myself. Council, in a discussion regarding guests in Fellows' guest rooms, solemnly pronounced that owing to limited numbers only male guests could be booked into these rooms. This led to protests, and a poem entitled 'women and children last' appeared on the Fellows' noticeboard. Council responded to this criticism by appointing a committee that included myself to consider the matter. We dealt with it by arranging that for a trial period two of the guest rooms would allow female guests, so it could be seen how that worked out. When the trial period came to an end, we announced that there did not seem

to be a problem with women guests, and the restriction was removed! The same Professor Littlewood had not heard of the rule change, and on one occasion challenged my mother, accusing her of breaking the rules when he saw that she was staying in a guest room with my father during a visit.

Back to changes over my lifetime: apart from changes such as there no longer being horse-drawn vehicles in the streets, or steam engines to propel trains, the most dramatic changes have involved computers. When I was a student there was just one computer in the University, EDSAC II, and as it used valves instead of transistors it was an enormous device, and to use it you had to go to the computer laboratory yourself and feed it information by punching holes in paper tape and feeding the tape into a tape reader. Then came the transistor, the chip capable of holding large numbers of transistors, and the mouse, and the touchscreen, allowing you to point effortlessly anywhere on the computer screen; then networks that allowed computers to talk to each other; and thence the replacement of snail mail by email, the world wide web and the search engine, so nowadays if you want information about something you just type in appropriate search terms and, if you are lucky, the information you want will come back instantly. In the 1960s I had to type my Fellowship dissertation and PhD thesis using a mechanical typewriter, with something called carbon paper inserted between sheets of paper to make copies, and had to make corrections with the aid of a rubber.

I should now like to say something about my own life. Both my parents were teachers, and my father was very interested in mathematics and had books on things like conic sections that I studied avidly. My mother was also a poet and a short story writer. (If you are interested, the cultural section at the bottom of my home page has links to a collection of her poems, and also to music by the band that my daughter Miranda, who is here tonight, plays in to entertain local people in the evenings, and my own composition ‘Sweet and Sour Harmony’, which has been played a couple of times at TCMS events.) Miranda is clearly a third generation poet: at our celebratory tea earlier today she handed me a birthday card with this poem:

*As we mark Brian Josephson's eightieth year
The professor deserves a big cheer!
He predicted with gumption
The Josephson Junction
And pursues other thoughts without fear.*

I found maths fascinating, particularly in regard to the way you can prove surprising things starting from axioms, and I later became very interested in physics. I had considerable support from my masters in these subjects at Cardiff High School. My physics teacher lent me a book on theoretical physics, from which I learnt to my surprise that it is possible to use quantum mechanics to calculate how substances behave, so physics is not just a matter of making measurements.

I came up to Trinity when I was nearly 18 and took Part II Maths in my first two years before changing to Part II Physics in my final year. For the second year in maths I had to choose between pure and applied and chose applied on account of the fact that I got higher marks in that subject in the Tripos. Later I realised that this had been a mistake, as the reason I got better marks in applied is that solving an applied maths question is a routine matter involving setting up the relevant equations and solving them, whereas more creativity is required in pure mathematics. I remember once saying about a Tripos question: 'after thinking about it for half an hour you can see how it can be solved in five minutes'. I found the applied maths course rather dull, as the situations addressed there seemed to have little to do with the real world, which is why I decided to change to physics, having discussed the possibility with Andrew MacLachlan who had recently done the same thing. I have no idea what is taught in Part I, as I do not seem to have missed anything through not having done that course.

My first physics paper was published while I was doing Part II Physics. I went to a lecture on the Mössbauer effect given by Trinity Fellow Robert Frisch. This effect was being used to test a prediction by Einstein that a clock at a height will go slightly slower than the same clock at sea level. The experiment took advantage of the fact that, in the case of iron-57, radiation is produced at a very precisely defined frequency. I tried to figure out how it worked and wondered whether the fact that objects have a higher mass when moving than if they are stationary might have an effect on the frequency. Changing the temperature makes atoms move faster, and my calculation showed that a change of only a degree would have as much of an effect on the frequency as the difference they were trying to measure, which could be rather important if you were not controlling the temperature precisely. I approached Frisch about this, and he passed me on to someone else who suggested I contact the people at Harwell who were doing the experiment. The outcome was a car being sent to the College to take me to Harwell to write a paper. A friend of mine who saw the uniformed driver crossing Great Court to collect me was most impressed!

For my PhD I decided I would do an experiment on superconductivity, as I did not want to spend all my time sitting at a desk thinking. But as I was the only person in the Mond Laboratory who could understand the theory, I had the job of understanding everything so I could help the others in the group with the theory. I came thus to understand things like broken symmetry that were to prove useful later. One day my supervisor Brian Pippard came to me waving a paper by Ivar Giaever explaining his mechanism for studying superconductivity. "That's wrong, isn't it", he said, referring to Giaever's equation for the current. Giaever had left out something called the coherence factor. I thought broken symmetry might explain it, which led me to do the calculation for which I got the Nobel Prize, adapting a calculation by Cohen, Falicov and Phillips to do so. I found out later that I had been very fortunate in that Falicov had been asked by the others to do the calculation for the two superconductor case but was baffled by the coherence factor issue, and so, fortunately for me, they decided to leave that case out of the paper, so it was left to me to figure it out.

John Adkins and I tried to observe the effect, but we chose an unsuitable material to observe it, and it was only nine months later that my prediction was confirmed by Anderson and Rowell. Meanwhile Bardeen, one of the inventors of the theory of superconductivity, had declared my theory incorrect and added a footnote to a paper of his saying that. A special session was set up during the 9th low temperature conference in London for Bardeen and myself to debate the issue, and I believe on the whole I won the argument, with support from experts in the audience.

After my PhD I spent a year at Bardeen's University, the University of Illinois at Urbana, a place that is even flatter than here! The local dogs were not used to bicycles, and the sight of the pedals turning seemed to excite them and they would give chase, which was rather frightening. For recreation, the ice rink was open once a week – I had learnt to skate on the Cam, which was frozen for six weeks in 1963, on speed skates lent to me by G. Kitson Clark.

I decided instead of working with Bardeen on superconductivity that I would work with Leo Kadanoff on critical phenomena, but on my return I decided to move away from physics, which I then found not so interesting as a subject of research, and I turned my attention to questions relating to how the brain works. This included incidentally a paper, 'Multistage acquisition of intelligent behaviour', involving a collaboration with Hermann Hauser, founder of Acorn Computers and ARM, who was at the Cavendish at the time. Later, in his shop

in King's Parade, he proudly showed me his electronic fruit machine, Acorn's first product using a chip.

However, at about this time I got interested in other things, and my scientific activities took a different turn, initially as a consequence of conversation on High Table with one of my subversive colleagues, mathematical geneticist George Owen, who introduced me to the subject of the paranormal. The College has quite a history of connections with the paranormal, and I am fond of pointing out to people the portrait of Henry Sidgwick on the way into Hall, noting his connection with the Society of Psychical Research (he was its first President). I was interested in the fact that there seemed to be parallels between quantum physics and the paranormal. Later, after Owen had moved to Toronto, he invited me to a psychokinesis conference, where there were impressive demonstrations of metal bending by Matthew Manning (I still have a desk key that he bent, with no visible tool; fortunately there was a spare). He also was able to make a compass needle move and suddenly stop, and measurements of his EEG showed that his brain rhythms changed to an unusual kind when he was performing psychically.

It is quite likely that my interest in such matters was the cause of extraordinary hostility from the department. Once I heard that the head of department got extremely worked up by a newspaper article that revealed that a visitor on sabbatical was doing experiments on psychokinesis. He feared this article would damage the reputation of the laboratory, but it seems to have survived! The department would do all it could to discourage people from working from me, including telling them that they could have funding from the laboratory if they worked with anyone other than me. It was also claimed, on dubious grounds, that I was unsuitable as a PhD supervisor, a point disproved subsequently by the fact that a student who had somehow evaded the laboratory's negative propaganda successfully got a physics PhD working under my supervision. Another student was very successful initially but then ran into problems with the department. He had written a computer simulation based on a concept known as hyperstructure, which he had used to simulate the process of balance. The plan had been to go on and try to simulate walking, something of current importance in the field of robotics. But then the powers that be intervened, insisting that he stop working on that project, on the curious grounds that it was not physics.

Interference by the bureaucracy is if anything even more of an issue today: I am in theory blocked from applying for funding for anyone working with me as I no

longer have a salary from the University, but I am allowed to get around this by defining a willing member of the department as virtual Principal Investigator, while I will be the real one. ‘Kafkaesque’ is I believe the word used for this kind of thing. The recipient of such funding would, in accord with the rules, also not be allowed to be in the department other than for meetings with me, with Admin saying to me ‘I am not minded to make an exception in this case’.

I sometimes refer to myself as the ‘resident heretic’, and I have come to appreciate over the years that science is far from being the objective mechanism for discovering the truth that it claims to be. It has its dogmas, supported by arguments that do not hold up under close examination, that it is dangerous to challenge. Heretics are not burnt at the stake nowadays, but they can come under unwarranted attack, and on occasion have lost their jobs as a result. I seem to have inherited some of my mother’s poetic skills, and this kind of thing sometimes inspires me to write poetry. In response to a particular event, I was inspired to write the following haiku:

*Madness season is here
Scientist waxing furious
To what end?*

I also amended verse by Laura Marling to read:

*They’ll come and get you in the dead of the night,
They’ll come and get you, if it’s not what they like.*

Let me move on now to something much more positive, namely the progress I have been making in my research despite the difficulties I have mentioned. Again, I have no time to go into much detail, but let me say first of all that a number of people have come to the conclusion, in various ways, that present day physics suffers through failing to take proper account of matters related to mind, and the question is what can be done about it. It turns out that biologists understand the subtleties of complex systems in a way that physicists do not, and it looks as if a clear synthesis of the various approaches should be possible, some of which I have covered in published work. The challenge is to persuade high-energy physicists to drop their present ‘theory of everything’ approach, which is not proving that fruitful at this time except as a mathematical exercise. Hopefully, the ideas will be published somewhere where they will be seen by physicists who will take them up. And I’ll leave it there!

College Notes



Undergraduate Admissions 2020

by Glen Rangwala (1993)

Trinity's admissions headline for 2020 is a record number of students joining in October. We are looking forward to welcoming 225 new undergraduates, an increase on our usual intake of 200.

The expanded size of the intake is largely due to most summer exams not taking place amidst the pandemic.

Trinity, like all Cambridge Colleges, relies upon a mix of assessment of submitted application materials, interview performance and prospective exam marks in making judgements about admissions. All offers that are made to applicants still at school are conditional upon a high level of achievement in any future exams – and most of our applicants still have crucial exams to take at the point of interview.

A few exams did take place, including the Sixth Term Examination Paper (STEP), which our offer-holders in Mathematics took remotely. These were very much the exception, and the large majority of our offer-holders received their grades on the basis of school assessments, which ended up being considerably more generous than the results we usually see. Amongst our offer-holders taking A Levels, there was a moment of national public controversy in the UK over the method for awarding those grades, when an earlier attempt to standardise grades across schools was abandoned in favour of accepting school assessments at face value. I am grateful to the significant number of alumni who wrote to me with their thoughts on this matter, which demonstrated to me the continued commitment of Trinity members in ensuring fairness in the admissions process. Those concerns are central to what we do in the College's admissions decisions. In practice, however, very few of our offer-holders had missed their offers on the basis of the original A Level grades that they were awarded. There was much national discussion about how the original method of grade standardisation disadvantaged students from poorer socioeconomic backgrounds or comprehensive schools. By contrast, almost all our students from those backgrounds had attained the grades they required in their A Levels even before the shift in policy. All 26 of our UK offer-holders were from

the most deprived areas of the country, using the measures of the Indices of Multiple Deprivation produced by the national governments, were awarded the A Level grades they required for entry to Trinity when those grades were originally issued.

The large intake clearly poses challenges to the College. The most obvious of those is accommodating the new students. Nevertheless, we have managed to put our extra capacity to use without having to compromise on our new measures to keep students in small households to prevent the spread of the pandemic. As a result, we were pleased that we did not have to ask any offer-holders to defer their entry.

More subtly, many of our incoming students will have had little formal schooling since March, and there were concerns that many may not feel prepared to start the intense and intellectually demanding courses that are lined up for them from October. To address this concern, we have been providing our offer-holders over the summer with suggestions to keep them working and thinking, and many subjects have done remote seminars and supervisions to help the new intake adjust to university-level studies.

A third challenge concerns the next admissions round. One of the reasons why we were keen to avoid significant numbers of students deferring their entry to 2021 was to prevent a situation in which the next round of applicants has fewer places available to them. We are still looking to take the same number of students in the next round as usual, to avoid causing them disadvantage. Our outreach activities and interviews though are all being done remotely, which relies on applicants being able to access the required technology – either at home or through their school – that they need, and on them being comfortable in that setting. Recruiting some of our new students, who themselves contain our highest proportion from less advantaged backgrounds and which contains our most gender-balanced UK intake, to act as online ambassadors for the College will be an important part of helping prospective students recognise that Trinity is a place at which they could aspire to study.

Trinity has long been a College that has students from highly diverse backgrounds. In terms of national backgrounds, our undergraduate students come from every part of the world, with the 2020 intake including stellar students who were schooled in Kenya, Peru and Mongolia, amongst many other countries. From next year, students from European Union countries have the additional hurdle

of being required to pay university fees at the Overseas rate, a significant increase that will deter many potential applicants. Trinity has responded by creating up to five bursaries per year for European students, which will help meet these additional costs if the student cannot otherwise afford the fees. Maintaining this diversity, both internationally and within the UK, is not easy in the current circumstances, with many young people anxious about leaving their familiar settings for university life. But we remain fully committed to this objective.

Graduate Studentships

Internal Graduate Studentships

Mr Radu CRISTEA (Romania), CPGS in Economics.

Mr Frederick H FEILDEN (UK), PhD in Asian and Middle Eastern Studies.

Mr Luke A GARDINER (Ireland), PhD in Pure Mathematics and Mathematical Statistics.

Mr Martin GAZO (Slovakia), PhD in Physics.

Mr Orlando H GIBBS (UK), PhD in Classics.

Mr Luke HALLAM (UK), MPhil in Political Thought and Intellectual History.

Ms Marie-Louise JAMES (UK/USA), MPhil in European, Latin American and Comparative Literatures and Cultures.

Mr Gevorg MARTIROSYAN (Armenia), PhD in Physics.

Miss Adva MOND (Israel), PhD in Pure Mathematics and Mathematical Statistics.

Mr Sean X SEET (Singapore), PhD in Applied Mathematics and Theoretical Physics.

Mr Sompob SHANOKPRASITH (Thailand), PhD in Physics.

Miss S X Emily SONG (UK), MPhil in Economics.

Mr Victor S SOUZA (Brazil), PhD in Pure Mathematics and Mathematical Statistics.

Mr Nikola SPASIC (Republic of Serbia), PhD in Pure Mathematics and Mathematical Statistics.

Miss Lucy E THOMPSON (UK), MPhil in Geographical Research.

Mr Zichen WANG (China), PhD in Physics.

Mr Xiang WEI (China), PhD in History.

Miss Yuyan XUE (China), PhD in Theoretical and Applied Linguistics.

Mr Boan ZHAO (China), PhD in Applied Mathematics and Theoretical Physics.

External Research Studentships were awarded to the following graduate students matriculating in 2020–21, in order to pursue research at Trinity in the fields indicated.

Mr M Suhail BIN MOHAMED YAZID (Singapore), National University of Singapore, PhD in History.

Mr Marco FATTORI (Italy) Università Degli Studi di Roma La Sapienza, PhD in Classics.

Mr William G FREEMAN (UK) University of Oxford, MPhil in Classics.

Mr Urs P HAEUSLER (Germany), Friedrich-Alexander Universität Erlangen Nürnberg, PhD in Physics (*Honorary*).

Miss Eleanor L HOPKINS (UK) University College London, PhD in Clinical Neurosciences (*Honorary*).

Ms Olivia K KRAUZE (UK) University of Oxford, PhD in English.

Mr E SHARXHI (Albania), University College London, MAST in Pure Mathematics.

Mr Leo V VERSTEEGEN (Germany), University of Hamburg, PhD in Pure Mathematics and Mathematical Statistics.

Other Graduate Studentships were awarded to the following graduate students in order to pursue research at Trinity in the fields indicated.

Miss Rosalind ACLAND (Australia), University of New South Wales, Henry Arthur Hollond Studentship in Law, Master of Law.

Mr Benjamin A ALLARD (USA), University of Minnesota, Trinity Overseas Bursary, MPhil in Politics and International Studies.

Miss Maral ATTAR-ZADEH (Canada), University of Toronto, Dunlevie King's Hall Studentship, MPhil in English Studies: Criticism and Culture.

Miss Elisabeth K BARBER (Australia) University of Sydney, Dunlevie King's Hall Studentship, MPhil in Political Thought and Intellectual History.

Ms Alexandra BEDFORD (Canada), McGill University, Coutts Trotter Studentship, PhD in Psychiatry.

Miss Laura BURGAZZI (UK), Queen Mary, University of London, Dunlevie King's Hall Studentship, MPhil in Medieval History.

Mr Vipin CHAUDHARY (India), University of Delhi, Sheepshanks Studentship in Astronomy, MAST in Applied Mathematics.

Mr Serban E CICORTAS (Romania), Princeton University, Trinity Studentship in Mathematics, MAST in Pure Mathematics.

Ms Isabelle DESISTO (USA), Harvard University, Eben Fiske Scholarship, MPhil in Politics and International Studies.

Mr Mert DILEK (UK) University of Cambridge, Trinity College, Camilla Mash PhD Studentship in English, PhD in English.

Ms Caroline DOCKES (France), London School of Economics, Knox Studentship for French Students, MPhil in Machine Learning and Machine Intelligence.

Ms Bertille A R T FOLLAIN (France), Ecole Polytechnique, Knox Studentship for French Students, MAST in Mathematical Statistics.

Miss Evgeniia GANBERG (Russian Federation), National Research University, Eastern European Bursary, MPhil in Medieval and Renaissance Literature.

Mr Callum R HALE-THOMSON (UK) University of Cambridge, Trinity College, Alice and James Penney PhD Studentship in English or European Literature, PhD in English.

Mr Agustin HUBNER VALDIVIESO (Chile), Pontifical Catholic University of Chile, Trinity Overseas Bursary, Master of Law.

Miss Hina KHALID (UK), University of Cambridge, St Edmund's College, Trinity-AHRC DTP Studentship, PhD in Theology and Religious Studies.

Miss Naomi M M KILCOYNE (UK) University of Cambridge, Clare College, Dunlevie King's Hall Studentship, MPhil in European, Latin American and Comparative Literatures and Cultures.

Mr Daniel E KRAUS VOLLERT (Colombia), Universidad de Los Andes, Trinity Overseas Bursary, MPhil in Social Anthropology.

Miss Ching Ching LAM (Hong Kong), Imperial College London, Krishnan Ang Studentship in Natural Sciences, PhD in Chemistry.

Mr Ray LI (Australia), University of New South Wales, Trinity Studentship in Mathematics, MAST in Pure Mathematics.

Ms Kun LIANG (China), University of Peking, Peking Exchange Scholarship, MPhil in Sociology.

Miss Louise M MAI (France), Ecole Normale Supérieure Paris, ENS Exchange Scholarship (Paris), MPhil in European, Latin American and Comparative Literatures and Cultures.

Ms Cheppayil Yamuna MENON (India), National Law School of India, Trinity Overseas Bursary, Master of Law.

Mr Ruward MULDER (Netherlands), Utrecht University, Tarner Studentship in Philosophy of Science or the History of Scientific Ideas, PhD in History and Philosophy of Science.

Mr Bilal NADEEM (USA), Harvard University, Charles Henry Fiske III Scholarship, MPhil in Health, Medicine and Society.

Mr Eric NEVILLE (Ireland), University College Dublin, Trinity Studentship in Mathematics, MAST in Applied Mathematics.

Ms Emma M PALMER (South Africa), University of Pretoria, Trinity Bursary for Students from Africa, MAST in Pure Mathematics.

Mr Jan PETR (Czech Republic), Charles University, Trinity Studentship in Mathematics, MAST in Pure Mathematics.

Mr Paul PHILIPPE (France), Ecole Normale Supérieure Lyon, ENS Exchange Scholarship (Lyons), MAST in Pure Mathematics.

Mr Felipe G PUCCIONI (Brazil), Federal University of Rio de Janeiro, Trinity Overseas Bursary, PhD in Development Studies.

Mr Martin E A RENARD (France), University of Cambridge, Sidney Sussex College, Dunlevie King's Hall Studentship, MPhil in Theoretical and Applied Linguistics.

Ms Anne J RICHTER (USA), University of Sheffield, Trinity College-Cambridge Marshall Scholarship, MPhil in Materials Science and Metallurgy.

Mr Michael RIZQ (UK), University of Cambridge, Trinity College, Trinity-AHRC DTP Studentship, PhD in English.

Mr Pierre A SALVADORI (France), Sorbonne University, Knox Studentship for French Students, Visiting Student (Faculty of History).

Miss Cerise M SIAMOF (USA), University of Wisconsin Madison, Dunlevie King's Hall Studentship, MPhil in Health, Medicine and Society.

Mr Adam J L SOUSSANA (France), Ecole Normale Supérieure Paris, ENS Exchange Scholarship (Paris), MPhil in Anthropocene Studies.

Mr Connor B STEVENS (UK) University of Cambridge, Trinity College, Leon Brittan Studentship in European Studies, MPhil in Economic and Social History.

Miss Talin E TAHAJIAN (USA), University of Cambridge, Sidney Sussex College, Gould Studentship in English Literature, MPhil in Medieval and Renaissance Literature.

Miss W Amanda M V WEERASINGHE (Sri Lanka), University of Manchester, Krishnan Ang Studentship in Natural Sciences, PhD in Engineering.

Ms Shayna R ZEMA (Israel), Brown University, Trinity Overseas Bursary, MPhil in Criminology.

Miss Alexandra ZHIRNOVA (Russian Federation), University College London, Trinity Overseas Bursary, MPhil in Anglo-Saxon, Norse and Celtic.

From the Senior Tutor

Professor Catherine Barnard (1996)

Stephen Bond



This is the COVID-19 year: the most dramatic period in the College's history since the Second World War. The College closed down on 13 March 2020. Students had to return to their homes across the globe at great speed. For some this was a huge challenge as borders rapidly closed and flights were cancelled amid deep uncertainty about the spread of the virus. Trinity tutors worked hard and fast to help the students.

Trinity was a shell from the end of March to the start of October. Almost all the tutorial and educational operations have been transferred online. The language of Zoom and Teams, totally alien a year ago, is very much part of our day-to-day jargon. In the summer term online platforms replaced face-to-face contact for all teaching and for DoS and tutor meetings. Fellows and staff held many meetings as the College worked out first how to manage the shutdown, and second how to manage the gradual reopening. Exams were carried out online and, in many subjects, formally graded. Who would have thought that the collegiate University could act so quickly when it had to? And the students rose to the challenge of online teaching and assessments and did very well in their exams.

The College has had to rethink every aspect of its work – teaching, of course, but also discipline and the awarding of prizes and hardship funds. And all of this against the background of a changing government landscape, never more so than over admissions. You may recall that the government had an algorithm which, at the eleventh hour, was found wanting. The government then said it would not use Centre Assessed Grades (CAGs), and so College admissions decisions were made accordingly. Then, at the eleventh hour and 59th minute, the government reverted to CAGs and admissions decisions were revised on this new basis. The bottom line for Trinity is that we took almost all our offer holders, and we have the largest year on record starting in October 2020. Our cohort is the most geographically, socially and ethnically diverse ever, with more students coming from widening participation backgrounds. We are proud to welcome so many talented students.

That said, the large number of new arrivals is presenting a considerable challenge in terms of accommodation and teaching provision, at a time when we are trying

to ensure social distancing. It will also put substantial pressure on our bursaries; more of this cohort will have access to the Cambridge Bursary Scheme and the Pilot Top-Up Bursary Scheme (PTUBS). While we were still mopping up bits and pieces from the last academic year, considerable effort has been put into preparing for this. We have had to strike a delicate balance between complying with government guidelines (not always as clear as they might be on the detail), managing the risk, and ensuring that the students can get the most possible out of Trinity in the middle of a pandemic. The College has been fortunate to draw on the experience of our new Master – and former Chief Medical Officer – Dame Sally Davies.

Our plans may have changed once more by the time you read this in response to new events and circumstances. As I write, we intend that students be put into “bubbles” in household groups. They will be encouraged to do as much as possible out of doors, including supervisions. Freshers’ Week will be part online and part in the open air. There will be tables and chairs under the cloisters where the students can eat, supervision pods under the Wren, and a new non-silent workspace/coffee shop is to open. We have prepared a welcome video and welfare talks online for the incoming students, safety talks and fire talks will also be online.

We are also conscious that this generation of students has not had any formal education for the best part of six months and many have not taken any exams. So there will be introductory seminars and preparatory supervisions – all online – before the students even arrive in Cambridge. And over 150 students will be quarantining in College for two weeks before term even starts.

We understand the students’ anxieties – and anxieties too of the staff and Fellows – about what the new term will bring. We sincerely hope that all our planning will pay off and we keep the students and our staff as safe as possible. Trinity is nothing without the students and we look forward to seeing them all again.

The Chapel 2019–20

Michael Banner (2006), Dean of Chapel



In its long history, Trinity has endured significant periods of disruption. The two world wars of the last century provide recent instances, but there will have been other times when what was deemed ‘normal life’ was radically disturbed or curtailed. Even in such a litany, however, our current pandemic will surely deserve special mention. A whole term was lost. Exams were abandoned. And the character and shape of the University year to come is somewhat uncertain to say the least. Happily – at least, as far as we know and for the moment – no lives have been lost, but in countless ways the life of the College has been curbed, caged and cribbed.

The year that ended in an untimely fashion had started well. Two new and outstanding Chaplains arrived with the regular intake of new and outstanding undergraduates and graduates. Olga Fabrikant-Burke hails from Moscow, came to Cambridge as a Gates Scholar, and has recently finished a doctorate in Old Testament studies. She has been a lay chaplain for the year, awaiting an autumn ordination which, as I write, is still expected to go ahead. John Summers completed a curacy in deepest Dorset, having practised as a barrister in Chancery for eight years before his training at Westcott House. Both Olga and John took up their roles with great enthusiasm and commitment – and have sought to maintain their engagement with and support to students in the new era of social distancing and Zoom. The new year will present its particular challenges for their work and the work of the Chapel more generally; the task will be to find new and yet effective ways to help sustain and maintain community even as our normal modes of social engagement are forbidden.

Standing at the back of the Chapel after a Sunday evensong, I make it my business to try to greet as many as possible – and I am reasonably good at spotting unknown faces and shaking hands and introducing myself. Most Sundays we are joined by a good number of visitors, from all corners of the globe, and also, of course, by members of the College no longer in residence who have come back for a particular occasion or merely on a whim. It is a particular sadness that the coming year will not allow the making of such new and renewed connections, but I hope that we will have an effective presence online – and that quite shortly

we will be able to look back on this disruption as one more challenge from which Trinity has emerged with a keener appreciation of the riches of our life together.

List of Preachers 2019–2020

Michaelmas Term 2019: What are we doing at Evensong?

Confessing: The Dean of Chapel

Hearing the Psalms: The Revd Dr Megan Daffern, Ely Diocesan Director of Ordinands and Vocations

Hearing the Scriptures: The Revd Dr Paul Dominiak, Vice-Principal of Westcott House, University of Cambridge

Singing the Canticles: The Revd Dr Stephen Cherry, Dean of King's College Cambridge

Remembrance Sunday Address: Wesley Kerr OBE

Praying the Creed and The Lord's Prayer: The Dean of Chapel (replacing the Revd Dr Jeremy Morris, Master of Trinity Hall, who was indisposed)

The Sermon: Canon Professor Carol Harrison FBA, Lady Margaret Professor of Divinity, Christ Church Oxford

Singing a Hymn: The Right Revd Tim Thornton, Bishop at Lambeth

Lent Term 2020: Parables of Jesus

The Sower: The Dean of Chapel

The Prodigal Son: The Revd Dr Karin Voth Harman, Priest in Charge of St Andrew's Cherry Hinton

The Rich Fool: The Revd Dr Simon Taylor QC, Priest at St Andrew's Stapleford

The Hidden Treasure & The Pearl: Professor George van Kooten, Lady Margaret's Professor of Divinity, University of Cambridge

The Talents: Olga Fabrikant-Burke, Chaplain

The Wedding Feast: The Revd John Summers, Chaplain

The Wise and Foolish Virgins: Professor Ian McFarland, former Regius Professor of Divinity, University of Cambridge

Easter Term 2020

Evensong broadcast on the choir YouTube channel with archive music from the Choir, readings and prayers led by members of College and a short pre-recorded Thought for the Day from a guest speaker.

The Dean of Chapel

The Revd John Summers, Chaplain

Olga Fabrikant-Burke, Chaplain

The Right Revd Libby Lane, Bishop of Derby

The Director of Music

The Right Revd & Right Hon. Lord Chartres GCVO PC, former Bishop of London

The Dean of Chapel



James Appleton

From the Senior Bursar

Rory Landman (2006)



The College has recently appointed a new Senior Bursar, Richard Turnill. Richard was appointed Assistant Bursar from 1 September 2020 and will from January 2021 succeed Rory Landman (2006), who will be stepping down after 14 years of service to the College.

The Senior Bursar's office looks after the College's investments and its Trust Funds. The team remains busy administering the College's investments, collecting the College's rents and dividends and disbursing Trust Funds, even though the past six months have been very challenging for Trinity.

The team comprises Vanessa Stagg, Dawn Stonebridge and Lesley Howard in general administration. Phil Collins and Andrew Manning work in the College's Estates Office and have recently welcomed Jayne Barnes and David Gartlon to the team. We sadly said goodbye to Ruth Hefford who has recently transferred to another department. We are also grateful to Jeremy Fairbrother, former Senior Bursar, who as Finance Secretary assists with non-investment matters.

The past year has seen continued investment by Trinity in the College Estates, particularly at the Cambridge Science Park and at Dunsfold. This has kept the team very busy.

From the Junior Bursar

Edward Knapp (2018)



"So much of Trinity never changes: academic excellence, outstanding Fellows, students and staff, and a charitable purpose of profound importance to deliver education, learning and research for the world." I wrote these words last year, in blissful ignorance of quite how much change in the wider world was around the corner for us all. Yet our enduring values, and our commitment to academic excellence, flourish in these troubled times, underpinned by our

remarkable Trinity Community. Central to this, we are fortunate to have such a resilient and multi-talented group of staff.

The COVID-19 pandemic has changed 2020, and far beyond, for us all and it will be a remarkable year within Trinity's history. The Courts of College have been eerily and sadly empty during the past term, finals have been sat remotely around the globe, College Council has met virtually for the first time ever in its history, and so many treasured and planned events, such as the May Ball, have been cancelled. We've introduced 'Digital Parlour' to help keep our Fellowship connected, and the new *Trinity Now!* newsletters to celebrate our wonderful staff. It was with tremendous sadness that we paused and reconfigured many activities in March 2020, and the Porters closed our doors to visitors as we sought to help protect the wider community. None of this compares to suffering and loss individuals have experienced as a result of COVID-19, and we have, rightly, put the health of our Trinity family, and wider community, at the heart of all our decision making.

During the pandemic, I no longer have the pleasure of working within Great Court and across our College estate but, like so many, have spent days at home on Zoom video calls. We have shifted rapidly to staff working from home and many have established work stations in kitchens, living rooms and bedrooms which are doubling up as home schools. Our staff have shown exceptional resilience during these times and I am pleased we have been able to support all staff during this period. Staff engagement has been rapidly transformed to 'Tea with the JB' over Zoom, bringing the benefits of many more staff being able to join but unfortunately without physical tea and cupcakes anymore! We have also managed to host online staff focus groups on topics such as how to improve the College's environmental footprint and decarbonise, and how appropriately to re-open College. I continue to be blown away by the dedication, enthusiasm and creativity of our staff body. We are thankful to those staff who continued to work at College, including the Porters, Works departments and many, many other teams, who have ensured the site remained safe and secure.

Teams around College have also facilitated free accommodation for student volunteers in the NHS, many wonderful activities such as outreach and Chapel services were switched to virtual events overnight, and our magnificent Wren Library was proudly lit up blue in tribute to NHS staff and key workers. We are proud of the innovation staff, students and Fellows have demonstrated during a difficult period.

We have taken stock of our plans for our Estate in the light of COVID-19 and postponed the refurbishment to North West Great Court until next year. However, we have pressed ahead with works on the Round Church Street, our multi-million pound development providing brand new, high quality and centrally located accommodation for Trinity students. We are delighted to welcome our new Estates Director, Chris Andrew, who joined us in January from the University of Greenwich and is bringing bucket loads of energy and experience in filling this crucial vacancy for College. We continue to be compassionate custodians for our beautiful site, ensuring longevity of our incredible historic buildings whilst sensitively enhancing the site so it meets the needs of future generations.

As the contingency planning moves into its next phase, we are coming to terms with a new normal. We are re-opening and welcoming students back for the 2020/21 academic year. Crises can bring out the best in communities and this has been evident across many parts of the collegiate University. As just one example, we will rent 71 en-suite rooms from St Edmund's College for twelve months in a mutually beneficial agreement that will enable all Trinity students who wish to come to College in October to be accommodated, given government requirements regarding COVID-19, while helping out one of the much loved colleges of collegiate Cambridge.

Despite all the upheaval and change that the COVID-19 pandemic has brought, Trinity stands steady in our wonderful community and charitable purpose. The pursuit and importance of excellence in education, learning and research is exemplified through the contribution many Trinity Fellows have made to helping tackle the coronavirus. It is clear that there will be more change and uncertainty to endure, but we will continue to adapt, evolve and innovate in order to ensure Trinity can continue to thrive, regardless of the challenges we face.

The Library

Nicolas Bell (2015)



As with every other aspect of College life, the past year in the Library divided into two halves. Michaelmas and Lent terms were as busy as ever, with a general increase in the number of supervisions, seminars and talks in the Wren Library for various groups of students and other visitors. From the end of March, the staff did their best to direct students to e-books, provided copies where needed and generally tried to maintain some version of a normal service in responding to research enquiries. In the days leading up to lockdown, we were able to assemble a varied collection of tasks which could be undertaken remotely, updating and enhancing catalogue records, typing up some older handwritten catalogues and improving the metadata which underpins the Wren Digital Library. The majority of the staff were thereby able to continue working throughout the period when the Library was closed to readers. As soon as staff were able to return, we recommenced the programme of digital photography, which this year has focused on Greek manuscripts as well as a number of the medieval manuscripts containing medical and alchemical treatises.

The summer brought an opportunity to spruce up the College Library, with new carpets and a coat of paint, followed by a careful consideration of how to re-open safely to readers while maintaining social distancing and improving air-flow. Meanwhile a long-harboured ambition to refurbish the Muniment Room was delayed by the pandemic, but thankfully completed at the end of September: a new air conditioning and dehumidification unit was installed, two leaking downpipes were repaired, a new floor was laid and shelving was improved. As a result, there is now very adequate housing for the most precious of the archives charting the history of the College and its estates – the *munimenta* are literally the fortifications of the College's endowment.

As in previous years, the bequest of H R Creswick enabled us to purchase a number of early printed books to add to the shelves of the Wren. Notable among these is an edition of the monumental anthology of Classical lore and legend compiled by Caelius Rhodiginus in the 16th century, in a copy owned and annotated by the Elizabethan poet, playwright and spy William Alabaster while he was a Fellow of Trinity. Donations through the year have included a



Rhodiginus, *Lectionum antiquarum libri triginta*, annotated by William Alabaster.

further collection of papers of Norman de Bruyne, sometime Junior Bursar and pioneering aeronautical engineer and inventor of glues, presented by his family, and a large collection of letters written by Georg Kreisel, Fellow of Trinity and Professor of Logic and Mathematics at Stanford University, to his friend M. Hubert Faure. Kreisel and Faure corresponded weekly for more than half a century, and this archive provides a valuable insight into the mind of the man generally acknowledged as Wittgenstein's most highly regarded student.

In August our Sub-Librarian Mr Sandy Paul retired after 25 years working in the Library. To replace him we were pleased to welcome Mr Steven Archer, who has moved from Oxford as Librarian of Christ Church, but had begun his career in libraries several years ago as Graduate Trainee Librarian at Trinity.



THE REGISTER

IN MEMORIAM





The Register

In Memoriam

- 1927** Mr C H Davis-Goff, August 1999
- 1936** Mr M H Bower, September 2019
- 1939** Dr P B S Cooper, 1 August 2020
The Revd C G W Pilkington, 20 December 2019
- 1940** Mr C M Berners-Lee, February 2019
- 1941** Mr S G Garrett, 2 December 2019
- 1942** Dr A P C Bacon, 17 February 2020
Mr R A Bride, 28 September 2020
Mr J N Rucker, 23 December 2019
- 1943** Dr J E Forster, 6 December 2019
- 1944** Dr L Kopelowitz MBE, 27 July 2019
Dr B D Powell, 2020
Mr B L Teltscher, April 2020
Mr J P M Wardell, 27 April 2019
- 1945** Dr H J Davies, 8 February 2019
Father Brian Sandeman, 12 November 2019
- 1946** Dr W Beckerman, 18 April 2020
Dr D J Candlin, 4 December 2019
Mr J E C Coey, 2020
Mr P D R Gardiner, 5 February 2019
The Revd D A Hughes, 23 June 2020
Professor E J Kenney FBA, 23 December 2019
- 1947** Sir John Graham Bt GCMG, 11 December 2019
Mr H R Norman, 19 May 2020
Mr P J Payne, 28 October 2019
- 1948** The Revd Professor D R Gordon, 22 January 2020
Mr R J Leppard CBE, 22 October 2019
The 2nd Viscount Montgomery of Alamein CMG CBE, 8 January 2020
Mr D H Newbury-Ecob, 2020

- 1949** Dr B S Ashby MChir FRCS, 26 October 2019
Archbishop Michael Bowen, 17 October 2019
Mr F C Chute, 04 September 2019
Dr S T Crump, 31 July 2019
Mr P I Dobb, 07 October 2019
Mr S F Every, 14 December 2019
Mr C M Mosselmans TD, 1 March 2019
Mr R H Soper, 28 May 2020
Dr A J Wilkinson, 5 February 2019
- 1950** Mr K F Burns, 3 March 2020
Mr J H Gooch, 2019
The Revd J C Howard-Cowley, 5 February 2020
The Revd D H McNeile, January 2015
Brother Anselm Smyth SSE, 30 December 2019
- 1951** Mr G G Frosdick, 25 December 2019
Mr M R H Jeffries, 23 April 2020
Mr N B Y Jung, November 2019
Mr J D Phethean, 2019
Mr M H Scott, 17 May 2020
Mr L P A Sizaret, 16 March 2020
Mr D P Wynne-Griffiths, 30 May 2020
- 1952** Mr M L Berger, 15 July 2019
Mr P V Dix, 28 March 2020
Mr D Glenton, 1 October 2020
Mr J G Smythson, November 2019
Mr D F Snook, 9 September 2020
Dr D T Wright OC, 21 May 2020
Mr D J Wykes, January 2020
- 1953** The Revd T F D Bravington, 29 March 2020
Dr M T T Bryant, 27 July 2020
Professor G De Vahl Davis, 24 December 2019
Mr R C P Elgood, 9 April 2020
Mr A Lillingston, 26 July 2014
Captain T W Ritson, 1 September 2019
- 1954** Mr P D Burnford, 6 June 2020
Mr J S Fairbairn, 2020
Professor A M Guénault, 30 October 2019
Mr N N Jha, 15 June 2020
Mr B A Pratt, 26 August 2020
Mr R Sebag-Montefiore, 25 March 2020
Mr J Smithson, 25 August 2019

- 1955** Mr P J Bird, 26 March 2020
 Mr J Collins, 15 February 2019
 Mr D M Croucher, 22 April 2020
 Professor Emeritus I S Laurie, 27 February 2020
 Mr P Mountfield, 1 June 2020
 Mr J C Playll, 7 July 2020
 Mr J M Read, 11 April 2020
- 1956** Mr R S Dobson OBE FREng, 7 September 2019
 Mr J R W Pardey, 5 September 2019
 Mr R S Skilbeck, 22 July 2020
 Mr A A Stowell, 2019
 Dr L D Supran, 6 December 2019
 Mr J P Tydeman OBE, 1 April 2020
 Mr G C M Young DL, 12 October 2019
- 1957** Mr B G Ashley, 31 January 2020
 Mr S B Beresford-Davies, 30 January 2020
 Mr J C P Edmonds, 25 May 2020
 Mr K W Hill, 28 March 2020
 The Lord Lester of Herne Hill QC, 8 August 2020
 The Revd J H Platts, 2 November 2019
 Dr S G Warren, 2020
- 1958** The Revd D M Charles-Edwards, 6 March 2020
 Mr K G Hartley, 11 July 2019
 Professor L L Iversen FRS, 30 July 2020
 Mr J A Land, 24 September 2020
- 1959** Mr F A A Carnwath CBE, 26 June 2020
 Mr D J Lehmann, 2019
 Mr W Marsden CMG, 12 October 2019
 Dr R M F Moss, 5 November 2019
 Mr C A Robertson, 2019
 Mr D B Sowter, November 2019
 Professor D J West, 31 January 2020
- 1960** His Hon. David Martineau, 21 May 2020
 Dr K Shibata, 28 February 2020
- 1961** Mr A Bradley, 25 August 2019
 Mr D A Clayton, 1 September 2019
 The Lord MacLennan of Rogart PC, 18 January 2020
 The Revd Dr P N Virgin, 13 September 2018
- 1962** Mr J Edwards, 1 March 2020
 Mr F Grenfell, 3 December 2019

- Dr M Hardman FRSA, 4 November 2019
 Mr J W Northrop, 23 March 2020
- 1964** Professor N Rutter, 8 June 2019
 Mr D J Wood, 14 March 2020
- 1965** Lt Gen Sir Anthony Pigott KCB CBE, 19 March 2020
- 1966** Dr K B Gove, 20 March 2020
- 1968** Mr J H Davies, 8 October 2019
- 1969** Mr P R Isaacs, 2018
- 1970** Mr A L Laycock, 24 May 2019
 Dr N Riddell, June 2019
- 1971** Mr H J Alexander, 9 December 2019
- 1972** Professor C J Skinner CBE FBA, 21 February 2020
 Professor K F Tan, 20 December 2016
- 1973** Mr J P Hysted, 12 May 2019
 Professor R Sharpe FBA, 22 March 2020
- 1974** Mr M G Norman, 29 October 2019
- 1975** Dr H B Ryan, 4 November 2019
- 1978** Professor S W Sloan RSA FREng FRS, 23 April 2019
- 1986** Mr K Kartha
- 1987** Mr N A Trentham, 26 August 2019
- 1993** Ms J B Ali, 8 April 2020
- 2000** Mr I R Napier, 7 November 2019
- 2017** Mr M Sporic, 7 November 2019

Mrs R Rogers (1998) was wrongly included in the In Memoriam section of the 2019 edition. The Editor sincerely apologises for this mistake.

Addresses Wanted

We are grateful to all who have made it possible for us to update our records during the past year. If you are in contact with Trinity members who are not currently hearing from the College, please encourage them to contact us either by letter to the Alumni Relations & Development Office, Trinity College, Cambridge CB2 1TQ, by emailing alumni@trin.cam.ac.uk or by completing the 'Address Update' form on the website: www.trin.cam.ac.uk/alumni/information.

Thank you,

Paul Wingfield (1990), Editor.

ADDRESSES WANTED



Stephen Bond

